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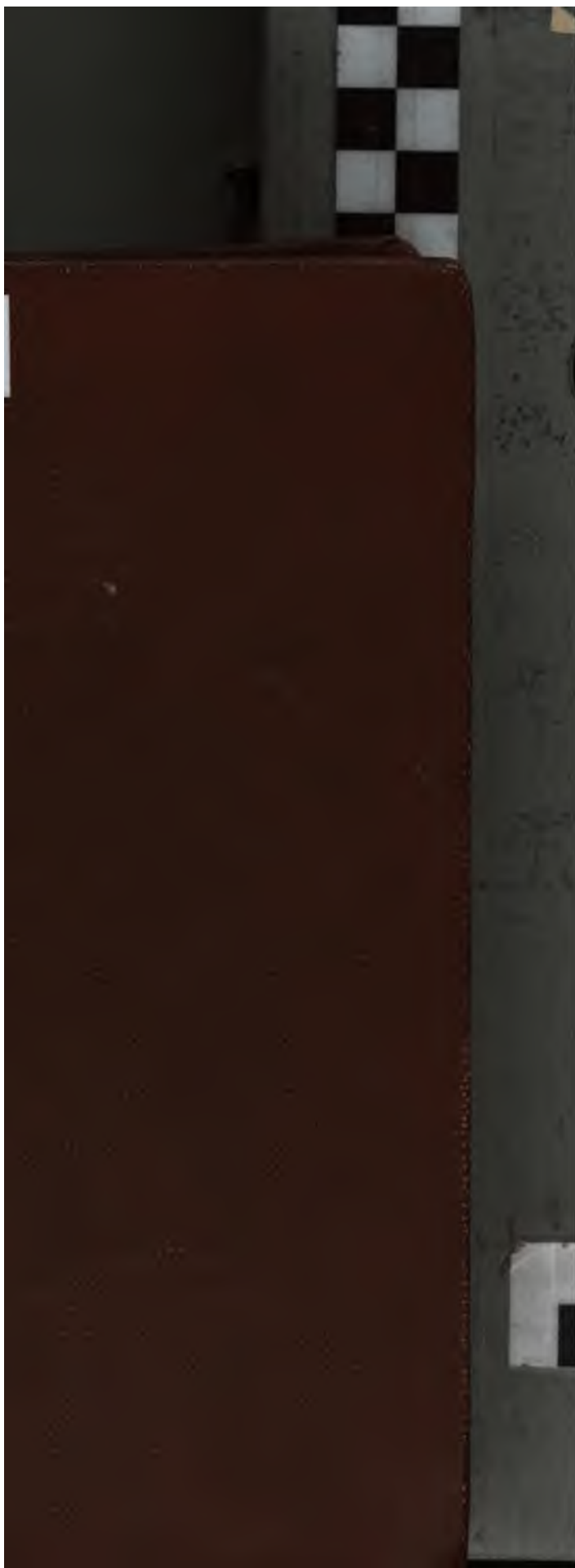
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ANNEX









P. Mayman inv. & del.

C. Brown sculp.

. Ah! fly, incautious Youth, the flattering Fair
 Which PLEASURE spreads to lure thee to her Fair
 In her soft Courts conceal'd, pale MANT and CAR
 And dire DISEASE, and keen REMORSE await
 Those Friends shall drive thee from her daz'ling Fair
 And swift to ENVY'S dread Cave consign

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THE
ELEMENTS
OF
LOGICK.

INTRODUCTION.

I.  F all the human Sciences, that concerning Man, is certainly the most worthy of Man, and the most necessary Part of Knowledge. We find ourselves in this World surrounded with a Variety of Objects; we have Powers and Faculties fitted to deal with them, and are happy or miserable in proportion as we know how to frame a right Judgment of Things, and shape our Actions agreeably to the Circumstances in which we are placed. No Study therefore is more important than that which introduces us to the Knowledge of ourselves. Hereby we become acquainted with the Extent and Capacity of the human Mind, and Learning to distinguish what Objects it is suited to, and in what manner it must proceed, in order to compass its Ends, we arrive by degrees at that Justness and Truth of Understanding, which is the great Perfection of a rational Being.

*Importance
of the Know-
ledge of our-
selves.*

II. If we look attentively into Things, and survey them in their full Extent, we see them rising one above another in various Degrees of Eminence. Among the inanimate Parts of Matter some exhibit nothing worthy our Attention, their Parts seem as it were jumbled together by mere Chance;

*Different
Gradations of
Perfections in
Things.*

2 INTRODUCTION.

nor can we discover any Beauty, Order, or Regularity in their Composition. In others we discern the finest Arrangement, and a certain Elegance of Contexture, that makes us affix to them a Notion of Worth and Excellence. Thus Metals, and precious Stones, are conceived as far surpassing those unformed Masses of Earth, that lie every where exposed to view. If we trace Nature onward, and pursue her through the vegetable and animal Kingdoms, we find her still multiplying her Perfections, and rising by a just Gradation, from mere Mechanism to Perception, and from Perception in all its various Degrees, to Reason and Understanding.

III. But though Reason be the Boundary, by which Man is distinguished from the other Creatures that surround him, yet we are far from finding it the same in all. Nor is this Inequality to be wholly ascribed to the original Make of Men's Minds, or the Difference of their natural Endowments. For if we look abroad into the several Nations of the World, some are over-run with Ignorance and Barbarity, others flourish in Learning and the Sciences; and what is yet more remarkable, the same People have, in different Ages, been distinguished by these very opposite Characters. It is therefore by Culture, and a due Application of the Powers of our Minds, that we increase their Capacity, and carry human Reason to Perfection. Where this Method is followed, Knowledge and Strength of Understanding never fail to ensue; where it is neglected, we remain ignorant of our own Worth: and those latent Qualities of the Soul, by which she is fitted to survey this vast Fabrick of the World, to scan the Heavens, and search into the Causes of Things, lie buried in Darkness and Obscurity. No Part of Knowledge therefore yields a fairer Prospect of Improvement, than that which takes account of the Understanding, examines its Powers and Faculties, and shews the Ways by which it comes to attain its various Notions of Things. This is properly the Design of *Logic*, which may be justly stiled the History of the human Mind, inasmuch as it traces the Progress of our Knowledge, from our first and simple Perceptions, through all their different Combinations, and all those numerous Deductions that result from variously comparing them one with another. It is thus that we are let into the natural Frame and Contexture of our own Minds, and learn in what manner we ought to conduct our Thoughts, in order to arrive at Truth, and avoid Error. We see how to build one Discovery upon another, and by preserving the Chain of Reason-

I N T R O D U C T I O N. 3

Reasonings uniform and unbroken, to pursue the Relations of Things through all their Labyrinths and Windings, and at length exhibit them to the View of the Soul, with all the Advantages of Light and Conviction.

IV. BUT as the Understanding in advancing from one Part of Knowledge to another, proceeds by a just Gradation, and exerts various Acts, according to the different Progress it has made, Logicians have been careful to note these several Steps, and have distinguished them in their Writings by the Name of the Operations of the Mind. These they make four in Number, and agreeably to that, have divided the whole System of Logick into four Parts, in which these Acts are severally explained, and the Conduct and Procedure of the Mind, in its different Stages of Improvement, regulated by proper Rules and Observations. Now, in order to judge how far Logicians have followed Nature, in this Distinction of the Power of the Understanding, let us take a short View of the Mind, and the manner of its Progress, according to the Experience we have of it in ourselves, and see whither the Chain of our own Thoughts will without Constraint lead us.

Operations of the Mind.

V. FIRST then, we find ourselves surrounded with a Variety of Objects, which acting differently upon our Senses, convey distinct Impressions into the Mind, and thereby rouse the Attention and Notice of the Understanding. By reflecting too on what passes within us, we become sensible of the Operations of our own Minds, and attend to them as a new Set of Impressions. But in all this there is only bare *Consciousness*. The Mind, without proceeding any farther, takes notice of the Impressions that are made upon it, and views Things in order, as they present themselves one after another. This Attention of the Understanding to the Object acting upon it, whereby it becomes sensible of the Impressions they make, is called by Logicians *Perception*; and the Notices themselves, as they exist in the Mind, and are there treasured up to be the Materials of Thinking and Knowledge, are distinguished by the Name of *Ideas*.

Perception.

VI. BUT the Mind does not always rest satisfied in the bare View and Contemplation of its Ideas. It is of a more active and busy Nature, and likes to be assembling them together, and comparing them one with another. In this complicated View of Things, it readily discerns, that some agree, and others disagree, and joins or separates them according to this Perception. Thus upon com-

Judgment.

paring the Idea of two added to two, with the Idea of four, we at first Glance perceive their Agreement, and thereupon pronounce that two and two are equal to four. Again, that white is not black, that five is less than seven, are Truths to which we immediately assent, as soon as we compare those Ideas together. This is the first and simplest Act of the Mind, in determining the Relations of Things, when by a bare Attention to its own Ideas, comparing any two of them together, it can at once see how far they are connected or disjointed. The Knowledge thence derived is called *intuitive*, as requiring no Pains or Examination; and the Act of the Mind assembling its Ideas together, and joining or disjointing them according to the Result of its *Perceptions*, is what Logicians term *Judgment*.

VII. INTUITION affords the highest degree of *Reasoning*. Certainty, it breaks in with an irresistible Light upon the Understanding, and leaves no room for Doubt or Hesitation. Could we in all Cases, by thus putting two Ideas together, discern immediately their Agreement or Disagreement, we should be exempt from Error, and all its fatal Consequences. But it so happens, that many of our Ideas are of such a Nature, that they cannot be thus examined in Concert, or by any immediate Application one to another; and then it becomes necessary to find out some other Ideas, that will admit of this Application, that by means of them we may discover the Agreement or Disagreement we search for. Thus the Mind wanting to know the Agreement or Disagreement in Extent, between two inclosed Fields, which it cannot so put together, as to discover their Equality or Inequality, by an immediate Comparison, casts about for some intermediate Idea, which by being applied first to the one, and then to the other, will discover the Relation it is in quest of. Accordingly it assumes some stated Length, as a Yard, &c. and measuring the Fields, one after the other, comes by that means to the Knowledge of the Agreement or Disagreement in question. The intervening Ideas, made use of on these Occasions, are called *Proofs*; and the Exercise of the Mind in finding them out, and applying them for the Discovery of the Truths it is in search of, is what we term *Reasoning*. And here let it be observed, that the Knowledge gained by Reasoning, is a Deduction from our intuitive Perceptions, and ultimately founded on them. Thus in the Case before-mentioned, having found by measuring, that one of the Fields makes three-score square Yards, and the other only sixty-five, we thence
conclude

INTRODUCTION. 5

conclude that the first Field is larger than the second. Here the two first Perceptions are plainly intuitive, and gained by an immediate Application of the Measure of a Yard to the two Fields, one after another. The Conclusion, though it produces no less certain Knowledge, yet differs from the others in this, that it is not obtained by an immediate Comparison of the Ideas contained in it one with another, but is a Deduction from the two preceding Judgments, in which these Ideas are severally compared with a third, and their Relation thereby discovered. We see therefore, that Reasoning is a much more complicated Act of the Mind than simple Judgment, and necessarily presupposes it, as being ultimately founded on the Perceptions thence gained, and implying the various Comparison of them one with another. This is the great Exercise of the human Faculties, and the chief Instrument by which we push on our Discoveries, and enlarge our Knowledge. A Quickness of Mind to find out intermediate Ideas, and apply them skilfully in determining the Relations of things, is one of the principal Distinctions among Men, and that which gives some so remarkable a Superiority over others, that we are apt to look upon them as Creatures of another Species.

VIII. THUS far we have traced the Progress of the Mind in Thinking, and seen it rising by *Meth.* natural and easy Steps, from its first and simple Perceptions, to the Exercise of its highest and most distinguishing Faculty. Let us now view it in another Light, as enriched with Knowledge, and stored with a Variety of Discoveries, acquired by the due Application of its natural Powers. It is obvious to consider it in these Circumstances, as taking a general Survey of its whole Stock of intellectual Acquisitions, disposing them under certain Heads and Classes, and tying them together, according to those Connections and Dependencies it discerns between them. It often happens, in carrying on our Enquiries from Subject to Subject, that we stumble upon unexpected Truth, and are encountered by Discoveries, which our present Train of Thinking gave no Prospect of bringing in our way. A Man of clear Apprehension, and distinct Reason, who after due Search and Examination, has mastered any Part of Knowledge, and even made important Discoveries in it, beyond what he at first expected, will not suffer his Thoughts to lie jumbled together, in the same confused manner as Chance offered them; he will be for combining them into a regular System,

6 INTRODUCTION.

where their mutual Dependence may be easily traced, and the Parts seem to grow one out of another. This is that Operation of the Mind, known by the Name of *Disposition* or *Method*, and comes in the last in order, according to the Division of the Logicians, presupposing some tolerable Measure of Knowledge, before it can have an Opportunity of exerting itself in any extensive degree.

IX. WE see then that this fourfold Distinction of the Powers of the Mind into Perception, Judgment, Reasoning and Disposition, as well as the Order in which they are placed, have a real Foundation in Nature, and arise from the Method and Procedure of our own Thoughts. It is true, there are many other Actions and Modifications of the Understanding, besides those above-mentioned, as Believing, Doubting, Assenting, &c. but these are all implied in the Act of Reasoning, in the like manner as Compounding, Abstracting, Remembering, may be referred to the first Operation of the Mind, or Perception. This will appear more fully in the Sequel, when we come to handle the several Parts of Logick separately; at present we shall content ourselves with this general Account of Things; only it seems necessary to observe, that *Perception* and *Judgment*, in the Propriety of the *English* Tongue, have a much more extensive Signification than Logicians commonly allow them. We not only perceive the Ideas in our own Minds, but we are said also to perceive their Agreement or Disagreement; and hence arise the common Phrases of intuitive Perceptions, Perceptions of Truth, and of the Justness of Arguments or Proofs; where it is manifest, that the Word is applied not only to our Judgments, but also to our Reasonings. In a word, whatever comes under the View of the Mind, so as to be distinctly represented and taken notice of, whether an Idea, Proposition, Chain of Reasoning, or the Order or Connection of Things, is thereby rendered an Object of Perception, and gives Employment to this first and most simple of our Faculties. In like manner the Word *Judgment* is seldom in common Discourse confined to obvious and self-evident Truths. It rather signifies those Conjectures and Guesses that we form, in Cases which admit not of undoubted Certainty, and where we are left to determine by comparing the various Probabilities of Things. Thus a Man of Sagacity and Penetration, who sees far into the Humours and Passions of Mankind, and seldom mistakes in the Opinions he frames of Cha-

INTRODUCTION. 7

Characters and Actions, is said to judge well, or think judiciously. For these Reasons, it might not be improper to change the common Names of the two first Operations of the Mind, calling the one *simple Apprehension*, and the other *Intuition*; which two Words seem better to express their Nature, and the Manner in which they are conversant about their several Objects. This Accuracy of Distinguishing, where there is any the least Difference, is in a peculiar Manner necessary in a Treatise of Logick, as it is the professed Design of that Science, to teach us how to form clear and distinct Notions of Things, and thereby avoid being misled by their Similitude or Resemblance.

X. HAVING thus given a general Idea of the four Operations of the Mind, and traced their Connection and Dependence one upon another, I would next observe, that in consequence of this Division of the Powers of the Understanding, *Logick* is also divided into four Parts, which treat severally of these Acts, and give Rules and Directions for their due Conduct and Regulation. The Operations themselves we have from Nature, but how to exert them justly, and employ them with Advantage in the Search of Truth, is a Knowledge that may be acquired by Study and Observation. It is certain that we meet with false Reasonings as well as just. Some Men are distinguished by an Accuracy of Thinking, and a happy Talent of unravelling and throwing Light upon the most obscure and intricate Subjects. Others confound the easiest Speculations; their Understandings seem to be formed awry, and they are incapable of either conceiving clearly themselves, or making their Thoughts intelligible to others. If then we set ourselves carefully to observe, what it is that makes the one succeed so well, and how the others come to miscarry, these Remarks will furnish us with an Art of the highest Use and Excellency in the Conduct of Life. Now this is the precise Business of *Logick*, to explain the Nature of the human Mind, and the proper Manner of conducting its several Powers, in order to the Attainment of Truth and Knowledge. It lays open those Errors and Mistakes we are apt through Inattention to run into, and teaches us how to distinguish between Truth, and what carries only the Appearance of it. By this means we grow acquainted with the Nature and Force of the Understanding, see what Things lie within its Reach, where we may attain Certainty and Demonstration, and when we must be contented with bare

Logick divided into four Parts. Its Usefulness and Excellency.



8 INTRODUCTION.

Probability. These Considerations sufficiently evince the Usefulness and Benefit of this Science, which ought to be established as the Foundation and Ground-work of all our other Knowledge, if we really wish to succeed in our Enquiries. But we shall now proceed to treat of its Parts separately, according to the Division given of them above.

THE
ELEMENTS
OF
LOGICK.

BOOK I.
Of SIMPLE APPREHENSION, *or*
PERCEPTION.

CHAP. I.
Of the Original of our Ideas.

I. **T**HE first Thing we observe, when we take a View of what passes within us, is, that we are capable of receiving Impressions from a Variety of Objects, that distinct Notices are thereby conveyed into the Understanding, and that we are conscious of their being there. This Attention of the Mind to the Objects acting upon it, is what we call *simple Apprehension*, and is in Fact the Mind itself, taking a View of Things, as represented to it by its own Consciousness. It is by this means that we come to be furnished with all those *Ideas* about which our Thoughts are employed. For being sensible of the Impressions made upon us, and attending to the Perceptions they bring, we can renew them again.

Simple Apprehension and Ideas.

again upon Occasion, even when the Objects that first produced them are removed. Now our *Ideas* are nothing else but these renewed Representations of what we have at any time perceived and felt, by means of which, things are again brought under the View of the Mind, and seem to have a kind of Existence in it. It is true, we can upon many Occasions combine our *Ideas* variously together, and thereby form to ourselves Representations of things that never had an Existence in Nature, as when we fancy a Centaur, or a Golden Mountain; but it is still certain, that the original *Ideas* out of which these are made, are such as have been conveyed into the Mind by some former Impressions. It remains therefore to enquire, how we came by our first Notions and Perceptions of things. Whence does the Understanding derive those original Impressions and Characters, which it can combine in so many different Ways, and represent to itself under such infinite Varieties? To this I answer, that if we attend carefully to what passes in our own Minds, we shall observe two Inlets of Knowledge, from whence, as from two Fountains, the Understanding is supplied with all the Materials of thinking.

II. FIRST, outward Objects, acting upon our Senses, roule in us a Variety of Perceptions, according to the different manner in which they affect us. It is thus that we come by the *Ideas* of Light and Darkness, Heat and Cold, Sweet and Bitter, and all those other Impressions which we term sensible Qualities. This great Source and Inlet of Knowledge, is commonly distinguished by the Name of *Sensation*, as comprehending all the Notices conveyed into the Mind, by Impulses made up in the Organs of Sense.

III. BUT those *Ideas*, numerous as they are, are wholly derived to us from without; there is therefore yet another Source of Impressions, arising from the Mind's Attention to its own Acts, when turning inwards upon itself, it takes a View of the Perceptions that are lodged there, and the various Ways in which it employs itself about them. For the *Ideas* furnished by the Senses, give the Mind an Opportunity of exerting its several Powers; and as all our Thoughts, under whatever Form they appear, are attended with Consciousness, hence the Impressions they leave, when we come to turn the Eye of the Soul upon them, enrich the Understanding with a new Set of Perceptions, no less distinct than those conveyed in by the Senses. Thus it is that we get *Ideas* of Thinking, Doubting,

Doubting, Believing, Willing, &c. which are the different Acts and Workings of our Minds, represented to us by our own Consciousness. This second Source of Ideas is called *Reflection*, and evidently presupposes Sensation, as the Impressions it furnishes, are only of the various Powers of the Understanding, employed about Perceptions already in the Mind.

IV. THESE Considerations, if we duly attend to them, will give us a clear and distinct View of the natural Procedure of the human Intellect, in its Advances to Knowledge. We can have no Perception of the Operations of our own Minds until they are exerted; nor can they be exerted before the Understanding is furnished with Ideas about which to employ them; and as these Ideas, that give the first Employment to our Faculties, are evidently the Perceptions of Sense, it is plain, that all our Knowledge must begin here. This then is the first Capacity of the human Mind, that it is fitted to receive the Impressions made upon it by outward Objects affecting the Senses; which Impressions thus derived into the Understanding, and *there lodged* for the View of the Soul, employ it in various Acts of Perceiving, Remembering, Considering, &c. all which are attended with an internal Feeling and Consciousness. And this leads us to the second Step the Mind takes in its Progress towards Knowledge, *viz.* that it can by its own Consciousness represent to itself these its several Workings and Operations, and thereby furnish the Understanding with a new Stock of Ideas. From these simple Beginnings, all our Discoveries take their Rise; for the Mind thus provided with its original Characters and Notices of things, has a Power of combining, modifying, and examining them in an infinite Variety of Lights, by which means it is enabled to enlarge the Objects of its Perception, and finds itself possessed of an inexhaustible Stock of Materials. It is in the various Comparison of these Ideas, according to such Combinations of them as seem best to suit its Ends, that the Understanding exerts itself in the Acts of Judging and Reasoning, by which the capacious Mind of Man pushes on its Views of Things, adds Discovery to Discovery, and often extends its Thoughts beyond the utmost Bounds of the Universe. Thus we see as it were at one Glance, the whole Progress of the Soul, from the very first Dawnings of Perception, till it reaches the Perfection of human Knowledge; nor shall we, among all its vast Stock of Discoveries, or that infinite Variety of Conceptions where-
of

Rise and Progress of human Knowledge.

12 Of SIMPLE APPREHENSION, Book I.

of they consist, be able to find one original Idea which is not derived from Sensation or Reflection, or one complex Idea, which is not made up of those original ones.

*Division of
our Ideas into
simple and
complex.*

V. HAVING thus shewn how the Mind comes to be first furnished with Ideas, we shall next proceed to the Consideration of the Ideas themselves, and endeavour to give such an Account of them, as will best serve to explain their several Appearances, and the Manner in which they are formed. It is evident from what has been said above, that they all fall naturally under these two Heads. First, those original Impressions that are conveyed into the Mind by Sensation and Reflection, and which exist there simple, uniform, and without any Shadow of Variety. Secondly, those more complex Notions of Things that result from the various Combinations of our simple Ideas, whether they are conceived to co-exist of themselves in any particular Subject, or are united and joined together by the Mind, enlarging its Conceptions of Things, and pursuing the Ends and Purposes of Knowledge. These two Classes comprehend our whole Stock of Ideas; and when considered separately in that Order, wherein they most naturally seem to offer themselves to our Thoughts, will, I hope, give such a View of the Conduct and Manner of the Mind, as may contribute not a little to introduce us to an Acquaintance with ourselves, and make us sensible of the Capacity and Extent of the human Intellect. We proceed therefore to a more particular Account of this Division of our Ideas.

CHAP. II.

Of simple Ideas.

*Simple Ideas
what.*

I. THE first Class of our Ideas are those which I distinguish by the Name of simple Perceptions; because they exist in the Mind under one uniform Appearance, without Variety or Composition. For though external Objects, convey at once into the Understanding, many different Ideas all united together, and making as it were one Whole; yet the Impressions themselves are evidently distinct, and are conceived by the Mind, each under a Form peculiar to itself. Thus

Thus the Ideas of Colour, Extension, and Motion, may be taken in at one and the same Time, from the same Body; yet these three Perceptions are as distinct in themselves, as if they all proceeded from different Objects, or were exhibited to our Notice at different Times. We are therefore carefully to distinguish between our simple and primitive Conceptions, and those different Combinations of them, which are often suggested to the Mind, by single Objects acting upon it. The first constitute our original Notices of Things, and are not distinguishable into different Ideas, but enter by the Senses simple and unmixed. They are also the Materials out of which all the others, how complex and complicated soever, are formed; and therefore ought deservedly to be looked on as the Foundation and Ground-work of our Knowledge.

II. Now if we take a Survey of these Ideas, and their several Divisions and Classes, we shall find them all suggested to us, either by our Senses, or the Attention of the Mind to what passes within itself. Thus our Notices of the different Qualities of Bodies, are all of the Kind we call simple Ideas, and may be reduced to five general Heads, according to the several Organs which are affected by them. Colours, &c. and Sounds are conveyed in by the Eyes and Ears; Tastes, and Smells by the Nose and Palate; and Heat, Cold, and Solidity, &c. by the Touch. Besides these, there are others which make Impressions on several of our Senses, as Extension, Figure, Rest and Motion, &c. the Ideas of which we receive into our Minds both by seeing and feeling.

III. If we next turn our View upon what passes within ourselves, we shall find another Set of simple Ideas, arising from our Consciousness of the Acts and Operations of our own Minds. Perception or Thinking, and Volition or Willing, are what every Man experiments in himself, and cannot avoid being sensible of. I shall only observe farther, that besides all the above-mentioned Perceptions, there are others that come into our Minds by all the Ways of Sensation and Reflection; such are the Ideas of Pleasure and Pain, Power, Existence, Unity, Succession, &c. which are derived into our Understandings, both by the Action of Objects without us, and the Consciousness of what we feel within. It is true some of these Ideas, as of Extension and Duration, cannot be conceived altogether without Parts; nevertheless they are justly rank'd among our simple Ideas; because their Parts being

*Simple Ideas
of Sensa-
tion.*

*Simple Ideas
of Reflection,
&c.*

all

all of the same Kind, and without the Mixture of any other Idea, neither of them can be resolved into two distinct and separate Conceptions : Thus they still answer the Definition given above, of being one uniform Appearance in the Mind, without Variety or Plurality. But to prevent confounding our simple Ideas of Space and Duration, with those complex Modes of them, marked out by the several Measures commonly in Use, as Yards, Miles, Days, Years, &c. it may perhaps be more proper, to consider the least Portions of either, whereof we can form a clear and distinct Perception, as the simple Ideas of that kind, out of which all their other Modes and Combinations are formed. Such an Instant, or Point, may be conceived to be the same in respect of Duration or Space, as Unity is in respect of Number ; and will serve best to shew, how by a continued Addition or Repetition, our more enlarged and complex Ideas are made up.

IV. HAVING thus given a general View of our simple Ideas, I have still two Observations to make concerning them. The first is, that they are such as can only be conveyed into the Mind by the proper Channels and Avenues provided by Nature ; insomuch that if we are de-

stitute of any of those Inlets, by which the Impressions that produce them are wont to be admitted, all the Ideas thence arising are absolutely lost to us ; nor can we, by any Quickness of Understanding, find a Remedy for this Want. A Man born blind, is incapable of the Ideas of Light and Colours ; in like manner as one who is deaf, can form no Notion or Conception of Sound. Hence it appears, that these our simple Ideas are just such as Nature has furnished them, and have no Dependence on our Will ; we can neither destroy them when in the Understanding, nor fashion or invent any new one, not taken in by the ordinary means of Perception. So that we here see the utmost Bounds of human Knowledge, which however mighty and enlarged, cannot exceed the Limits of these our simple original Ideas, and their various Combinations.

V. AND this leads me to the second Observation I proposed to make, which is, that though the Mind cannot, in multiplying its Conceptions of Things, advance one Pace beyond the Materials furnished it by Sense and Consciousness ; yet as it has a Power of combining, modifying and enlarging them, in all the different Ways in which they can be put together, it thereby finds itself in Possession of an inexhaustible Treasure of Ideas, sufficient to employ

*Simple Ideas
have no Ad-
mission but by
the proper In-
lets of Nature.*

*They furnish
ample Mate-
rials of
Knowledge.*

ploy it to the full Extent of all its Powers, and furnish Matter for those various Opinions, Fancies, and Views of Things, that make up the Subject of its Thoughts and Contemplations. Let us but reflect upon the single Idea of Unity or One, and observe what a Variety of Combinations are formed, by continually adding it to itself; inso- much that the Understanding finds no Stop or Boundary, in its Progress from Number to Number. In what an In- finity of different Lights may Extension alone be considered? What Limits can be set to that endless Diversity of Fi- gures, which it is in the Power of the Imagination to fashion and represent to itself? If to these we add those numberless other Combinations, that result from variously compounding and comparing the rest of our simple Ideas, we shall have little Reason to complain of being limited to a scanty Mea- sure of Knowledge, or that the Exercise of the human Fa- culties is confined within narrow Bounds. But having traced the Progress of the Mind through its original and simple Ideas, until it begins to enlarge its Conceptions by uniting and tying them together; it is now time to take a Survey of it as thus employed in multiplying its Views, that we may see by what Steps it advances from one Degree of Improve- ment to another, and how it contrives to manage that infinite Stock of Materials it finds itself possessed of.

VI. WHOEVER attentively considers his own Thoughts, and takes a View of the several com- plicated Ideas that from time to time offer them- selves to his Understanding, will readily observe, that many of them are such as have been de- rived from without, and suggested by different Objects affecting his Perception; others again are formed by the Mind itself, variously combining its simple Ideas, as seems best to answer those Ends and Purposes it has for the present in View. Of the first Kind are all our Ideas of Substances, as of a Man, a Horse, a Stone, Gold: Of the second are those arbitrary Collections of things, which we on many Occasions put together, either for their Usefulness in the Commerce of Life, or to further the Pur- suit of Knowledge: such are our Ideas of stated Lengths whether of Duration or Space, as Hours, Months, Miles, Leagues, &c. which Divisions are apparently the Creatures of the Mind, inasmuch as we often find them different in di- ferent Countries, a sure sign that they are taken from no certain and invariable Standard in Nature. Many of our Ideas of human Actions may be also referred to this Head,

*The Division
of complex I-
deas into those
of real Exi-
stence, and
those framed
by the Mind.*

as Treason, Incest, Manslaughter; which complex Notions we do not always derive from an actual View of what these Words describe, but often from combining the Circumstances of them in our own Minds; or, which is the most usual Way, by hearing their Names explained, and the Ideas they stand for enumerated. These two Classes comprehend all our complex Conceptions, it being impossible to conceive any that are not either suggested to the Understanding by some real Existences, or formed by the Mind itself, arbitrarily uniting and compounding its Ideas. We shall treat of each in Order.

C H A P. III.

Of our Ideas of Substances.

Ideas of Substances, Collections of simple Ideas, held together by unknown Supports.

I. THE first Head of complex Ideas mentioned in the foregoing Chapter is that of *Substances*, which I chuse to handle before the other, because, as will afterwards appear, the Notices derived from this Source, very much help us, in forming those arbitrary Collections, which make up the second Division.

For in many of them, we take our Hints from the Reality of things, and combine Ideas that actually exist together, though often with an Exclusion of others, as will be explained when we come to treat of abstract and universal Notions. It has been already observed, that the Impressions conveyed into the Understanding from external Objects, consist for the most part of many different Ideas joined together, which all unite to make up one Whole. These Collections of various Ideas, thus co-existing in the same common Subject, and held together by some unknown Bond of Union, have been distinguished by the Name of *Substances*, a Word which implies their subsisting of themselves, without Dependence (at least as far as our Knowledge reaches) on any other created Beings. Such are the Ideas we have of Gold, Iron, Water, a Man, &c. For if we fix upon any one of these, for instance Gold, the Notion under which we represent it to ourselves, is that of a Body, yellow, very weighty, hard, fusible, malleable, &c. Where we may observe, that the several Properties that go to the Composition of Gold, are represented

represented to us by clear and evident Perceptions ; the Union two of these Properties, and their thereby constituting a distinct Species of Body, is clearly apprehended by the Mind ; but when we would push our Enquiries farther, and know wherein this Union consists, what holds the Properties together, and gives them their Self-subsistence, here we find ourselves at a Loss. However, as we cannot conceive Qualities, without at the same time supposing some Subject in which they inhere ; hence we are naturally led to form the Notion of a Support, which serving as a Foundation for the Co-existence and Union of the different Properties of things, gives them that separate and independent Existence, under which they are represented to our Conception. This Support we denote by the Name *Substance* ; and as it is an Idea applicable to all the different Combinations of Qualities that exist any where by themselves, they are accordingly all called *Substances*. Thus a House, a Bowl, a Stone, &c. having each their distinguishing Properties, and being conceived to exist independent one of another, the Idea of Substance belongs alike to them all.

II. IN Substances therefore there are two things to be considered : First the general Notion of Self-subsistence, which, as I have said, belongs equally to them all ; and then the several Qualities or Properties, by which the different Kinds and Individuals are distinguished one from another. These Qualities are otherwise called *Modes*, and have been distinguished into *Essential* and *Accidental*, according as they are conceived to be separable or inseparable from the Subject to which they belong. Extension and Solidity are essential Modes of a Stone, because it cannot be conceived without them ; but Roundness is only an accidental Mode, as a Stone may exist under any Shape or Figure, and yet still retain its Nature and other Properties.

The Division of Modes into Essential and Accidental.

III. I MIGHT run farther into these Divisions and Subdivisions, in which Logicians have been very fertile ; but as they tend little to the Advancement of real Knowledge, and serve rather to fill the Memory with Words and their Significations, than furnish clear and distinct Apprehensions of Things, I shall not trouble the Reader with them. It is more material to observe, that the Change of Properties in any Substance, though it oft-times changes the Nature of that Substance, that is, its Species or Kind ; yet it never destroys

The Notion of Self-subsistence: inseparable from Substances.

the general Notion of Self-subsistence, but leaves that equally clear and applicable, as before any such Alteration happened. Wood by the Application of Fire is turned into Charcoal; but Charcoal however different from Wood, is still a Substance. In like manner, Wax may be converted into Flame and Smoak, a human Body will moulder into Dust, yet these Alterations destroy not their Being or Existence; they are still Substances as before, though under a different Form and Appearance. In the several Experiments made by Chymists, Bodies undergo many Changes, and put on successively a great Variety of different Shapes; and yet by the Skill and Address of the Operator, they are often brought back to their first and primitive Form. What Alteration can we suppose the Fire, or the Application of any other Body to make, unless on the Configuration, Texture, or Cohesion of the minute Parts? When these are changed, the Body is proportionably changed; when they return to their original State, the Body likewise puts on its first and natural Appearance.

*Foundation of
the different
Species of cor-
poreal Sub-
stances.*

IV. ALL that is essential to Matter therefore, is the Cohesion of solid extended Parts; but as these Parts are capable of innumerable Configurations, as their Texture may be very various, and the internal Constitution thence arising be of Consequence extremely different in different Bodies, we may from these Considerations conceive pretty clearly, the Source and Foundation of all the different Species of corporeal Substances. Nor is this a Notion taken up at Random, or one of those chimerical Fancies in Philosophy, derived rather from a Warmth and Liveliness of Imagination, than Observations drawn from Things themselves. Do we not daily see our Food, by the Changes it undergoes in the different Avenues of the Body, converted first into Blood, and thence employed in nourishing, building up, and enlarging, the several Parts of that wonderful Fabrick? Rain descending from the Clouds, and mixing with the Mold or Earth of a Garden, becomes Aliment for Trees of various Kind, puts on a Diversity of Forms, according to the different Channels and Conveyances thro' which it passes, and at last after innumerable Changes and Transmutations, sprouts forth in Leaves, opens in Buds, or is converted into the Substance of the Tree itself. Can we conceive any greater Difference between the component Parts of Gold, and those of a Stone, than between the moistened Particles of Garden Mold, and those new Forms and Figures, under which they appear, after they have been

been thus fashioned by Nature, for the Purposes of Growth and Nourishment?

V. If this be duly attended to, it will not appear wonderful to assert, that the Variety of material Substances, arises wholly from the different Configuration, Size, Texture, and Motion of the minute Parts. As these happen to be variously combined, and knit together under different Forms, Bodies put on a Diversity of Appearances, and convey into the Mind by the Senses, all those several Impressions, by which they are distinguished one from another.

Essence of Substances nothing but the internal Structure and Constitution.

This internal Constitution or Structure of Parts from which the several Properties that distinguish any Substance flow, is called the Essence of that Substance, and is in Fact unknown to us, any farther than by the perceivable Impressions it makes upon the Organs of Sense. Gold, as has been said, is a Body yellow, very weighty, hard, fusible, malleable, &c. That inward Structure and Confirmation of its minute Particles, by which they are so closely linked together, and from which the Properties above-mentioned are conceived to flow, is called its Essence; and the Properties themselves are the perceivable Marks that make it known to us, and distinguish it from all other Substances. For our Senses are not acute enough to reach its inward Texture and Constitution. The Parts themselves, as well as their Arrangement, lie far beyond the utmost Penetration of human Sight, even when assisted by Microscopes, and all the other Contrivances of Art.

VI. Thus as to the Essence, or internal Constitution of Gold, we are wholly in the dark; but many of the Properties derived from this Essence, make obvious and distinct Impressions, as the Weight, Hardness, and yellow Colour, &c.

Is wholly unknown to us, nor serves to distinguish the Species.

These Properties combined together, and conceived as co-existing in the same common Subject, make up our complex Idea of Gold. The same may be said of all the other Species of corporeal Substances, as Lead, Glass, Water, &c. our Ideas of them being nothing else, but a Collection of the ordinary Qualities observable in them.

VII. THIS however ought to be observed, that though the Essence or inward Structure of Bodies, is altogether unknown to us, yet we rightly judge, that in all the several Species, the Essences are distinct. For each Species being a Collection of

It is rightly presumed to be distinct in all the several Kinds.

Properties, which taken together, are different from those of every other Species, the Conformation of Parts, on which those Properties depend, must in like manner be different; and this, as we have said, constitutes the Essence. Iron and Glass are evidently distinct Kinds of Body, their perceivable Qualities have little or nothing common; and therefore the inward Structure or Constitution from which these Qualities flow, cannot be the same in both. But after all, this is the only thing we can with Certainty affirm concerning these Essences, which lying so wholly in the Dark, we shall do well to lay them aside in our Reasonings about Things, and stick to those more intelligible and settled Ideas, got by joining together their various Properties and Powers. For thus only is true Knowledge promoted, when we argue from known Qualities, and not from a supposed internal Constitution, which however real in itself, yet comes not within the Reach of our Faculties, and therefore can never be a Ground to us, for any Discoveries or Improvements.

*By what
Steps we ar-
rive at the
Notion of
immaterial
Substances.*

VIII. MATERIAL Substance, as I have said, includes the Idea of solid, cohering, extended Parts, and is divided into different Classes, according to the different Impressions made upon the Organs of Sense. But besides these sensible Ideas received from without, we also experiment in ourselves Thinking and Volition. These Actions have no Connection with the known Properties of Body; nay, they seem plainly inconsistent with some of its most essential Qualities. For the Mind not only discovers no Relation between Thinking, and the Motion or Arrangement of Parts; but it also perceives that Consciousness, a simple individual Act, can never proceed from a compound Substance, capable of being divided into many. Let us suppose for Instance, a System of Matter endowed with Thought; then either all the Parts of which this System is composed must think, which would make it not one, but a Multitude of distinct conscious Beings; or its Power of thinking must arise, from the Connection of the Parts one with another, their Motion and Disposition, &c. which all taken together, contribute to the Production of Thought. But it is evident that the Motion of Parts, and Manner of combining them, can produce nothing but an artful Structure, and various Modes of Motion. All Machines of human Composition, as Watches, Clocks, &c. however artfully their Parts are set together, however complicated their Structure, though we conceive innumerable different Motions, variously

variously conjoined, and running one into another with an endless Diversity, yet never produce any thing but Figure and Motion. If a Clock tells the Hour and Minute of the Day, it is only by the Motion of the different Hands, pointing successively at the Figures marked on the Hour-Plate for that Purpose. We never imagine this to be the Effect of Thought or Intelligence, nor conceive it possible by any Refinement of Structure, so to improve the Composition, as that it should become capable of Knowledge and Conscientiousness. The Reason is plain: Thought is something altogether different from Motion and Figure, there is not the least Connection between them; and therefore it can never be supposed to result from them.

IX. THIS then being evident, that Intelligence *Which we*
cannot arise from an Union or Combination of un- *ask ourselves call*
intelligent Parts; if we suppose it to belong to *Spirits.*
any System of Matter, we must necessarily attribute it to all the Parts of which that System is composed; whereby instead of one, we shall, as was before observed, have a Multitude of distinct conscious Beings. And because Matter, how far soever we pursue the Minuteness of its Parts, is still capable of repeated Divisions, even to Infinity; it is plain, that this Absurdity will follow us, through all the Suppositions that make Thought inherent in a material Substance. Finding therefore Consciousness incompatible with the Cohesion of solid separable Parts, we are necessarily led to place it in some other Substance, of a distinct Nature and Properties, which we call *Spirit*.

X. AND here it is carefully to be observed, *Body and Spi-*
that the several Species of *corporeal* Substances, *rit, distinct*
tho' distinguished one from another, and rank'd *Substances.*
under different Names; yet agreeing in some common Properties, which taken together, make up the Notion of Body, are thence all conceived to partake of this general Nature, and to differ only as different Modifications of the same Substance. Whatever consists of solid extended Parts, is called Matter; and as all the various Species of Body, however distinguished from one another by their several Properties, have yet this in common, that they are made up of such solid separable Parts, hence they fall naturally under the general Denomination of material Beings, and are not conceived to differ but in their Form. Thus Gold, Antimony, Wood, &c. alike partake of the Notion of Body, they are all equally material Substances, and have no other Difference, but

what arises from the different Structure and Conformation, &c. of Parts, as we have shewn above. But *Spirit* is something altogether distinct from Body, nay and commonly placed in Opposition to it; for which Reason, the Beings of this Class are called *immaterial*, a Word that implies not any thing of their Nature, but merely denotes its Contrariety to that of Matter.

There may be many various Species of Substances, besides those that come within the Reach of our Faculties.

XI. BODY and Spirit therefore, differ not as Species of the same Substance, but are really distinct Kinds of Substances, and serve as general Heads, under which to rank all the particular Beings that fall within the Compass of our Knowledge. For we having no Ways of Perception but Sense and Consciousness, can have no Notices of Things, but as derived from these two Inlets, By our Senses we are informed of the Existence of solid extended Substances, and Reflection tells us, that there are thinking conscious ones. Beyond these our Conceptions reach not, and therefore, though there may be many other Kinds, as different from them as they are from one another, yet having no Faculties suited to them, they are as remote from our Knowledge, as Light and Colours from the Apprehension of a Man born blind. I believe it will hardly be doubted, but the Substance of the Creator, differs more from that of his Creatures, than any two created Substances can from one another; and therefore when we call God a Spirit, we ought not rashly to presume, that he is so in the same Sense, in which the human Soul is a Spirit. The Word is indeed used by us, to denote in general, all thinking intelligent Substances, in which Sense God is very fitly called a Spirit. But it were the Height of Folly to imagine, because this Name is applied, as well to the Mind of Man, as the Creator, that therefore they partake of one common Nature, and differ only as different Modifications of the same Substance. This I mention here, to check the Presumption of the human Mind, always forward to conclude that every thing comes within its Reach, and to deny Existence to whatever exceeds the Comprehension of its scanty and limited Powers. Beings of a superior Class, may enjoy many Ways of Perception unknown to us, from which they receive Notices as different from those in our Minds, as the Ideas we apply to Spirit, are from the Ideas we apply to Body. Solid and thinking Beings are, it is true, the only Ideas of Substance, that we are able to form; but this is no more an Argument against the Existence of

of other Kinds, than the want of the Ideas of Light and Colours, in a blind Man, would be a good Argument against the Reality or Possibility of such Perceptions.

XII. BEFORE I dismiss this Subject, it may not be improper to take Notice of a remarkable Difference, as to the Manner of our conceiving corporeal and spiritual Substances. Those of the first Kind convey themselves into the Mind by Impressions made upon the Organs of Sense; and as these Impressions are different in different Bodies, the Ideas they produce, must of course vary in proportion. Thus we get Perceptions of distinct Powers and Properties, and range Bodies into Classes, according as we find them to agree or disagree in these their observable Qualities. But it is not so in our Notion of Spirits; for having no Conception of their Powers and Operations, but what we feel and experience within ourselves, we cannot ascribe to them Properties or Ways of Knowledge, distinct from those suggested to us by our own Consciousness. And hence it is, that though we readily own there may be various Ranks of spiritual Beings, yet we are not apt to imagine them divided from one another, by any Diversity of Powers and Operations, but merely by possessing the same Powers, &c. in a higher or lower Degree. It is not however repugnant to Reason, that they should be distinguished by their several Properties, in like manner as sensible Things are by the different Qualities observable in them; but Properties of intellectual Natures, distinct from those of our own Minds, being altogether remote from our Conception, cannot serve us as a Means, whereby to distinguish their different Orders. We are therefore necessitated to conceive of them in a manner suited to our Way of Knowledge, and when we would rank them into Species, according to the Degrees of Superiority they are imagined to possess in the Scale of Being, we ascribe to them what we find most excellent in ourselves, as Knowledge, Thinking, Foresight, &c. and those in different Measures, proportioned to the Station peculiar to each Rank or Species. But that this is a very imperfect Way of distinguishing the various Orders of intellectual Beings, will not, I think, need many Words to make appear; especially if we consider, that the Manner of communicating their Thoughts, without the Intervention of bodily Organs, is a Thing to us altogether incomprehensible, and necessarily leads us to suppose, that

Difference in the Manner of conceiving corporeal and spiritual Substances.

they have Ways of Perception and Knowledge, which our Faculties cannot give us any Notice of.

*The Bounds
of Know-
ledge in our
present State
very narrow.*

XIII. BUT I shall not pursue these Reflections farther, what has been said sufficing, to give us some little Insight into the Extent and Capacity of our own Minds; to convince us, that our present State will not admit of a perfect and adequate Comprehension of Things; and to let us see, that there may be other Ways of Knowledge, beyond the Reach of the Faculties we now enjoy; which yet in succeeding Stages of our Existence, we may arrive at, when being freed from the present cumbersome Load of the Body, we shall mount up to Stations of greater Eminence, and advance by a perpetual Series of Approaches towards him, who is the Standard of Perfection and Happiness.

CHAP. IV.

Of Ideas framed by the Mind.

*In framing
many com-
plex Ideas,
the Mind is
wholly ac-
tive, and
proceeds by a
voluntary
Choice.*

I. **H**ITHERTO we have considered only, such Combinations of our simple Ideas, as have a real Union in Nature, and are suggested to the Mind by Things themselves, variously affecting our Perception; it is now Time to take a View of the other Class of our complex Notions; I mean those arbitrary Collections of different Ideas, which we on many Occasions bring together, by that Power which we find in ourselves, of uniting, comparing, and diversifying our Notices of Things. In the Reception of simple Ideas, and even in those of Substances, the Understanding is wholly passive, and the Perceptions produced correspond to the Impressions made upon it. When we see a House, or a Tree, they necessarily appear each under its proper Form; nor is it in our Power to receive from these Objects, other Ideas than what they are fitted to produce. But in this second Class of complex Conceptions, the Mind acts voluntarily and of Choice; it combines only such Ideas as are supposed best to suit its present Purpose, and alters or changes these Combinations, by inserting some, and throwing out others, according as the Circumstances of Things require their being

being viewed in different Lights. Now as this is by far the most comprehensive Branch of our Ideas, and includes those that most frequently occur in the Search and Pursuit of Knowledge, I shall endeavour to treat of them in the exactest Order and Method, and for that purpose range them under several Heads, according to the different Acts of the Mind exerted in framing and putting them together.

II. THESE ACTS may in the general be all reduced to three. 1. *Composition*, when we join many simple Ideas together, and consider them as one Picture or Representation. Such are our Ideas of Beauty, Gratitude, a Furlong, &c. And here let it be observed, that the Mind sometimes confines itself to the various Consideration of the same Idea, and by enlarging it in different Degrees, exhibits it under a Diversity of Forms. Thus by adding Units together, in distinct separate Collections, we come by all the several Combinations of Numbers, as a Dozen, a Score, a Million. At other times, we unite Perceptions of different Kinds, in which case the Composition is more manifest, and the Idea itself becomes of course more complicated. Harmony for instance is a compound Idea, made up of many different Sounds united; all which the Musician must have, and put together in his Mind, before the Ear can be entertained with the actual Performance. Now although the Act of the Mind, is in some Measure exerted in the framing of all our complex Notions, yet as many of them include certain limited and particular Considerations, arising from other Operations of the Mind employed about them, it is necessary to take account of these Acts also, if we would conceive clearly the Manner, in which the several Species of our compound Ideas are formed.

Three several Acts exerted by the Mind in framing its arbitrary Idea, viz. Composition.

III. 2. THE next Operation therefore of the Mind, about its Ideas, is *Abstraction*; when we separate from any of our Conceptions, all those Circumstances that render it particular, or the Representative of a single determinate Object; by which means, instead of standing for an Individual, it is made to denote a whole Rank or Class of Things. Thus upon seeing, for instance, a Square, or Circle, we leave out the Consideration of their Bulk and every thing else peculiar to them, as they immediately affect our Sight, retain only the Notion of their Figure and Shape. In this manner we get our *general* Ideas; for such naked Appearances, separated from the Circumstances of Time, Place,

&c.

Uc. serve the Mind as Standards, by which to rank and denominate particular Objects. When therefore we meet with a Figure, answering to the Shape and Form we have laid up in our Understandings, it is immediately referred by the Mind to this Pattern, and called by its Name, which by this means becomes proper to the whole Species. Thus a Square, or Circle, are *universal* Terms, common to all Figures of that particular Shape, and alike applicable to them where-ever they exist; in like manner as the Ideas themselves are *general*, and Representatives of all of the Kind.

*And Compar-
ison.*

IV. 3. THE third and last Act of the Mind about its Ideas, is the *comparing* them one with another; when we carry our Consideration of Things beyond the Objects themselves, and examine their Respects and Correspondencies, in reference to other Things which the Mind brings into a View at the same time. It is thus we get all our Idea of *Relations*, as of Greater, Less, Older, Younger, Father, Son, and innumerable others. This threefold View of our Ideas, as either compounded of many others put together, or made universal by the Abstraction of the Mind, or as representing the various Relations and Habitudes of Things, will give us an Opportunity of observing, whatever is most curious and useful in this fundamental Branch of Knowledge, and of explaining the Manner and Procedure of the Understanding, in enlarging its Views, and multiplying the Objects of Perception. That we may therefore conceive of this Matter with the greater Order and Clearness, we shall make each of these several Divisions, the Subject of a distinct Section.

S E C T. I.

Of Compound Ideas.

*Compound Ideas
are considered
here merely
as Combinations
of the Under-
standing.*

I. **W**E begin therefore with those Ideas which may be properly termed *compound*, as being derived from that Power the Mind has of uniting many Conceptions into one. Though this Class comprehends, in some sort, all our complex Notions; yet they are at present considered, merely as they are Combinations of the Under-
standing,

standing, and with a view to those particular Ideas, out of which they are framed. Here, as was already observed, the Mind sometimes proceeds, by enlarging and diversifying the same Idea: at other times it brings together Ideas of different Kinds, and in both ways finds infinite Scope and Variety. But that we may follow the natural Procedure of the Intellect, and trace it in its Advances from simple to more complicated Acts, we shall first take a View of it as employed about one and the same Idea, where perhaps we may meet with such Instances of Address, Management, and Contrivance, as will appear perfectly astonishing to one, who never set himself seriously to consider the Manner and Conduct of his own Mind.

II. THE most obvious and simple Idea we have, is that of *Unity* or *One*. By adding it to itself continually, and retaining the several Collections in our Minds, we come by all the different Combinations of *Numbers*, in which we readily perceive an endless Diversity. All these Ideas are nevertheless evidently distinct among themselves, the Addition of a single Unit, constituting a Number as clearly different from that immediately before it, as any two the most remote Ideas, are one from another. But that the Understanding may not lose itself, in the Consideration of those infinite Combinations, of which Unity is capable, it proceeds by regular Steps, and beginning with the original Idea itself, pursues it through all its Varieties, as they are formed by the repeated continual Addition of Unit after Unit. Thus Numbers are made to follow one another in an orderly Progression, and the several successive Collections are distinguished by particular Names.

Unity the Original and Foundation of all our Ideas of Number.

III. AND here we may take notice of a wonderful Artifice, made use of by the Mind, to facilitate and help it forward in its Conceptions. For as the Advance from Number to Number is endless, where they all to be distinguished by different Denominations, that had no Connection or Dependence one upon another, the Multitude of them must soon overcharge the Memory, and render it impossible for us to go any great Way in the Progress of Numbering. For this Reason, it is so contrived, that the Change of Names is restrained to a few of the first Combinations, all the rest that follow, being marked by a Repetition of the same

The artful Composition of the Names of Numbers a great Help to our Conceptions.

same Terms, variously compounded and linked together. Thus *thirteen* is ten and three, *fourteen* ten and four, and so on to *twenty*, or two tens, when we begin again with one, two, &c. until we advance to *thirty*, or three tens. In this Manner the Progression continues, and when we arrive at ten tens, to prevent Confusion, by a too frequent Repetition of the same Word, that Sum is distinguished by the Name of a *Hundred*. Again ten hundred is called a *Thousand*; at which Period the Computation begins anew, running through all the former Combinations, as ten thousand, a hundred thousand, ten hundred thousand; which last Collection, for the Reasons mentioned above, has the Name of a *Million* appropriated to it. With this Million we can begin as before, until it is repeated a million of times, when if we change the Denomination to *Billions*, and advance in the same manner through *Trillions*, *Quartillions*, the Series may be carried on without Confusion, to any Length we please.

And one of
the principal
Reasons that
our Ideas of
Numbers are
so remarkably
distinct.

IV. THIS artful Combination of Names, to mark the gradual Increase of Numbers, is perhaps one of the greatest Refinements of the human Understanding, and particularly deserves our Admiration, for the Manner of the Composition; the several Denominations being so contrived, as to distinguish exactly the Stages of the Progression, and point out their Distance from the Beginning of the Series. By this means it happens, that our Ideas of Numbers are of all others the most accurate and distinct, nor does the Multitude of Units assembled together, in the least puzzle or confound the Understanding. It is indeed amazing, that the Mind of Man, so limited and narrow in its Views, should yet here seem to shake off its natural Weakness, and discover a Capacity of managing with Ease the most bulky and formidable Collections. If we enquire particularly into the Reasons of this, we shall find it wholly owing to the Address of the Mind, in thus distinguishing Numbers by different Names, according to the natural Order of Progression. For as those Names are made to grow one out of another, they may be aptly compared to a Chain, all whose Parts are linked together, by an obvious and visible Connection. Hence comes it to pass, that when we fix our Thoughts upon any Number, however great and seemingly unmanageable; yet if it is once determined to a particular Name, we find it easy to run back through all the Stages of the Progression, even till we arrive
at

at Unity itself. By this means we see, with a single Glance of our Minds, not only the two Extremes of the Number under Consideration, but also the several intermediate Parts, as they are united to make up the whole.

V. Now it is to this clear and accurate View of the interjacent Ideas, that we owe our so distinct Perception of the various Combinations of Numbers. And indeed we may observe in the general, that all our Ideas of Quantity, especially when they grow to be very large, are no otherwise ascertained, than by that Perception we have of the intervening Parts, lying, if I may so say, between the Extremes. When we look at any Object considerably distant from us, if we have a clear View of the interjacent Lands and Houses, we are able to determine pretty nearly of its Remoteness; but if without such a Knowledge of the intervening Spaces, we should pretend to judge of the Distance of Objects, as when we see the Spire of a Steeple, behind a Wall, or beyond a Mountain, every one's Experience is a Proof, how liable we are in these Cases to be deceived. Just so it is in judging of Duration. When we carry back our Thoughts to any past Period of our Lives, without Consideration of the Number of Years, or Months; we find, that our Idea of the Time elapsed grows more distinct, in proportion as we become sensible of the intermediate Parts of our Existence. At first, we are apt to judge the Distance extremely short, but when we set ourselves to consider our several successive Thoughts and Actions, the Idea of the Duration grows upon us, and continues to increase, as the Attention of the Mind brings new Periods of Life into view.

*As they help
us to a clear
Perception of
the interjacent
Parts.*

VI. Hence it will be easy to conceive, how much the Mind is helped forwards in its Perception of Number, by that ready Comprehension of all the several Stages in a Progression, which peculiarly belongs to Ideas of this Class. But this, as I have before intimated, we derive from the orderly Series and Connection of Names, inasmuch that where they cease, the Computation of Numbers also ceases with them. We can have no Idea of any Sum, without a Knowledge of all the Terms that go before, according to the natural Order, in which they follow one another; so that he who cannot, in a regular way, count to ninety-nine, will never, while that Incapacity continues, be able to form the

*Without
Names we
cannot make
any Progress
in Number-
ing.*

the

the Idea of a hundred; because the Chain that holds the Parts together, is to him wholly unserviceable, nor can he represent to his Mind the several interjacent Combinations, without which it is impossible in this Case to arrive at a distinct Perception.

*The great
Advantages
of Address
in classing our
complex Con-
ceptions.*

VII. I HAVE insisted the more largely upon this, not only because it is by Number that we measure all other Things, as Duration, Extension, Motion, &c. but also, because it us lets into the most natural View of the Conduct and Procedure of the Understanding, and makes us sensible of the great Art and Address that is necessary, in the classing of our very complex Conceptions. He that can so put together the component Parts of an Idea, as that they shall lie obvious to the Notice of the Mind, and present themselves when Occasion requires, in a just and orderly Connection, will not find it very difficult, to obtain clear and accurate Perceptions, in most of those Subjects, about which our Thoughts are conversant. For the great Art of Knowledge lies, in managing with Skill the Capacity of the Intellect, and contriving such Helps, as if they strengthen not its natural Powers, may yet expose them to no unnecessary Fatigue, by entangling and perplexing them with Considerations remote from the Business in Hand. When Ideas become very complex, and by the Multiplicity of their Parts, grow too unweildy to be dealt with in the Lump, we must ease the View of the Mind, by taking them to Pieces, and setting before it the several Portions separately, one after another. By this leisurely Survey, we are enabled to take in the whole, and if we can draw it into such an orderly Combination, as will naturally lead the Attention Step by Step, in any succeeding Consideration of the same Idea, we shall ever have it at Command, and with a single Glance of Thought be able to run over all its Parts. I have therefore explained here at some length, the Conduct of the Mind in Numbering; it seeming to me the best Model in this Kind, whether we consider the many Advantages derived from such an orderly Disposition of our Ideas, or the great Art and Skill displayed in binding these Ideas together. This also is farther remarkable, in the Consideration of Number, that from it chiefly we derive the Notion we have of Infinity; it being apparent, that in adding Number to Number, there is no End; the Possibility of doubling or increasing our Stock in any Degree, remaining as obvious to the Understanding,

standing, after a great and continued Run of Progressions, as when we first began the Computation.

VIII. If we now turn our Thoughts towards *Space* and *Duration*, here too we shall find, that we very seldom arrive at clear and distinct Ideas of either, but when we introduce the Consideration of *Number*. The more obvious and limited Portions, it is true, easily slide into the Mind in the natural Way of Perception; but it was the Necessity of comparing these together, that put us upon the Contrivance of certain stated Measures, by which precisely to determine the Quantity in each. Thus Inches, Feet, Yards, Miles, &c. ascertain our Ideas of Extension; as Minutes, Hours, Days, Years, &c. measure the Progress of Duration. The lesser Parts, as lying most open to the Notice of the Understanding, and being more on a Level with its Powers, are retained with tolerable Exactness; and the larger Portions, when the Number of Repetitions of which they are made up, is known, are thereby also reduced into clear and determinate Conceptions. A Foot, and Yard, are Measures easily comprehended by the Mind; nor do we find any Difficulty in conceiving a Mile, when we consider it as equal to a certain Number of Yards. If we are still for increasing the Standard, we may take the Semidiameter of the Earth, and supposing it equal to 8000 Miles, make Use of it as a Measure, by which to ascertain the Distance of the Sun or fixed Stars. Just so it is in Duration; from Hours we rise to Days, Months and Years; by these repeated and added together, we measure Time past, or can run forward at Pleasure into Futurity, and that without any Confusion or Perplexity.

The Consideration of Number of great Use, in ascertaining our Ideas of Space and Duration.

IX. It is however to Number alone, that we owe this Distinctness of Perception, inasmuch as *Space*, and *Time*, considered apart, from the regular and orderly Repetition of Miles or Years, leave no determinate Impressions in the Mind, by which to know and distinguish their several Portions. Ideas of either, thus taken in at a Venture, are a confused and irregular Heap, especially where we endeavour to enlarge and magnify our Views, and give full Play to the Powers of the Intellect. Something indeed the Mind conceives; vast and mighty, but nothing that is precise, accurate, and just. But when it begins to consider these Ideas as made up of Parts, and fixing upon such as are proportioned

Without it they are apt to degenerate into a confused and irregular Heap.

to

32 Of SIMPLE APPREHENSION, Book I.

to its Reach, sets itself to examine how often they are repeated to make up the whole, the Perceptions of the Understanding put on a new Form, and discover their exact Bounds and Limits.

*Infinity as
Object too
large for
the Survey of
the human
Mind.*

X. AND thus as before in Number, so here in Extension and Duration, the Mind begins with simple and obvious Notices, advancing by Degrees to more enlarged and intricate Conceptions. A Day, or a Furlong, are of easy Apprehension to the Understanding, and by their Subdivisions into still lesser Spaces, exhibit themselves distinctly in all their Parts. With these variously repeated, we travel thro' Space and Time, so that being able to reduce all our Ideas of this Class, however mighty and enlarged, to the clear and determinate Perceptions of Number, we can conduct our Thoughts without Perplexity, and never find ourselves puzzled, but when presuming too much on our own Strength, we launch into Speculations, that stretch beyond the Powers of the human Intellect. Number may be compared to a Line, that setting out from Unity, runs on in a continual Increase of Length, without a Possibility of ever arriving at its ultimate Period. So far as we pursue it in our Thoughts, and trace its regular Advances, so far our Ideas are accurate and just. But when we let loose our Understandings after a boundless Remainder, and would fathom the Depth of Infinity, we find ourselves lost amidst the Greatness of our own Conceptions. Some Notions it is true we have, but such as exceeding the Dimensions of the Mind, lie involved in Darkness and Obscurity; and being destitute of Order, Method, and Connection, afford no Foundation, whereon to build any just and accurate Conclusions.

Never represented in its full Dimensions; but by an endless and ever growing Idea.

XI. AND this perhaps may be the Reason, why many modern Philosophers, in their Discourses concerning Infinity, have run into apparent Contradictions; because encountering with an Object too large for the Survey of the Understanding, they found themselves surrounded with inextricable Difficulties, which their scanty and defective Ideas were by no means able to dissipate or remove. The Truth of it is, finite Ideas alone, are proportioned to a finite Understanding; and altho' we are not wholly without a Notion of the Infinity of Number, yet it is not such a one, as comprehends and exhausts its Object, or exhibits

hibits it to the Mind, in its full Size and Dimensions. We only see the Idea, as capable of an endless Increase, but cannot by any Effort of Thought, take in the whole Prospect; and indeed, it is properly that Part of it, which lies beyond the Reach of our Perception, and still remains to be taken into the Account, to which we give the Name of Infinity.

XII. THIS Idea of the Infinity of Number, imperfect as it may seem, is nevertheless that, by which the Mind ascends to the Conception of *Eternity* and *Immensity*. For when we consider Duration, either as past, or to come, we find nothing to stop the Progress of our Thoughts, in the Repetition of Years, or Millions of Years: the farther we proceed, the more the Idea grows upon us, and when we have wearied ourselves with vain Efforts, we must own at last, that we can no more arrive at the End of Duration, than at the End of Number. It is true, the several Generations of Men, rise and disappear in very quick Successions; Earth itself may decay, and those bright Luminaries that adorn the Firmament of Heaven, be extinguished. But the Course of Time will not be thereby disturbed; that flows uniform and invariable, nor is bounded by the Period of their Existence. This double View of Duration, as having already revolved thro' numberless Ages, and yet still advancing into Futurity in an endless Progression, properly constitutes our Idea of *Eternity*. We speak indeed of an Eternity past, and an Eternity to come, but both these are bounded at one Extreme; the former terminates in the present Moment, and therefore has an End; the latter sets out from the same Period, and therefore has a Beginning; but taken together, they form a Line both ways infinitely extended, and which represents Eternity in its full Dimensions.

*Duration
whether con-
sidered as past
or to come
boundless,
subtends our
Idea of Eter-
nity.*

XIII. As in the Consideration of Time, we fix upon the present Moment, regarding it as the middle Point, which divides the whole Line of Duration into two equal Parts; so in the Consideration of Space, that particular Place in which we exist, is looked upon as a kind of Center to the whole Expansion. From thence we let loose our Thoughts on every Side; above, below, around, and find we can travel on, in the Repetition of Miles, and Millions of Miles, without ever arriving at the End of the Progression. It is not difficult indeed, to carry our Con-

*The Idea of
Immensity de-
rived from the
Consideration
of Space ever
growing on all
Sides of us.*

ceptions to the utmost Bounds of the Universe; at least so far, as it falls within our Notice. But then the Imagination rests not here, it sees immeasurable Spaces beyond, capable of receiving new Worlds, which it can pursue, as rising one above another, in an endless Succession. This Consideration of Space, ever growing on all Sides of us, and yet never to be exhausted, is that which gives us the Idea of *Immensify*; which is in Fact nothing else, but the Infinity of Number, applied to certain Portions of Extension, as Miles, or Leagues, &c. and these conceived, as extended every Way around us, in infinite and innumerable right Lines.

*Compound
Ideas resulting
from the Union
of Perceptions
of different
Kinds.*

XIV. HITHERTO we have considered the Mind, as employed about one and the same Idea, enlarging and diversifying it in various Forms. We have seen it rising from the most simple and obvious Notices, to the Conception of Infinity itself; and taken a View of it, in all the different Stages of its Improvement. Let us now proceed to the more complicated Act of Composition, when the Mind brings several Ideas of different Kinds together, and voluntarily combines them into one complex Conception. Such for Instance is our Idea of a *Tune*, as comprehending a Variety of Notes, with many different Modulations of Sound. And here it is to be observed, that tho' the complex Idea may be excited in us, by hearing the Air itself struck off, upon a proper Instrument; yet considered originally, it still belongs to this Class of Perceptions, which are distinguished as the arbitrary Collections of the Mind. It was the Musician, or Composer, that combined the several Notes, and determined the Order in which they were to follow one another; nor had that particular Composition of Sounds, any real Union in Nature, before they were thus brought together in his Mind. Of the same Nature are most of our Ideas of human Actions; for tho' many of them come to our Notice, by seeing the Actions themselves, or hearing them described by others; as *Distilling*, *Carving*, *Treason*, &c. yet it is plain, that they must have been projected and contrived in the Mind of Man, before they had a real Existence.

*How the Mind
is determined
in making
these Combi-
nations.*

XV. It is here that the Understanding has the greatest Scope, and finds most Employment for its active Powers; nor indeed is it possible to set any Bounds to the Ideas of this Class; the Combinations already made being almost innumerable, and those yet in the Power of the Mind affording an endless Diversity. It may not however be amiss to consider,
how

how we conduct ourselves amidst so great a Variety, and by what Rules we proceed, in making those Combinations, to which we have affixed particular Names, while others perhaps, no less obvious, are neglected. The Idea of Killing for Instance, joined to that of a Father, makes a distinct Species of Action, known by the Name of *Parricide*. It was doubtless as obvious, to distinguish between the killing of an old Man, and a Child, which yet we find is not done, both these Actions being comprehended under the general Name of *Murder*. By what Views therefore does the Mind regulate these its Combinations? Why is it determined to one Collection of Ideas rather than another? This cannot be well understood, without observing, that it is the End of Language to communicate our Thoughts one to another. Words are the Signs of our Ideas, and serve to express the Conceptions of the Mind. Now it is apparent, that such Conceptions, as are most apt to occur in the Commerce of Life, would be first distinguished by particular Names; the frequent Occasion Men have, of mentioning these among themselves, rendering this absolutely necessary. But as many of these Conceptions are Collections of different simple Ideas, hence we are insensibly led, to such peculiar Combinations, as are most serviceable to Purposes of mutual Intercourse and Communication.

XVI. LET us suppose, in the first Beginnings of Society, a Company of Legislators met together, in order to consult of proper Regulations, for the Government of the Community. If they are Men of Prudence and Foresight, they will naturally observe many new Occurrences likely to arise, from this Coalition of Mankind, and their living together in Crowds. Perhaps the Age in which they live, has not produced an Instance of one Man's killing another; yet from the Knowledge of their own Frame, and their Power of doing Hurt, they conceive this as a possible Case, and are willing to provide against it. Thus all the Ideas that enter into the complex one of *Murder*, are brought together, and united into one Conception, before the Action itself really exists. It is not however thought necessary, to take into Consideration the Age of the Person, the chief thing in View being to prevent the putting an End to another's Life unjustly, whether old or young; and therefore the Penalty equally affects both Cases. But when they come to consider the Relation, in which the Person killed may stand to the Murderer, here there appears a manifest Difference, as it adds to

Ideas of human Actions often formed, before the Actions themselves exist.

the Crime when committed upon a Benefactor, and renders it particularly heinous in the Case of a Father. This last therefore, is made to constitute a distinct Species of Action, and has a peculiar Punishment allotted to it. Thus we see, how Men, according to their different Manner of Life, and the Relations they stand in to one another, are naturally led to form several Collections of simple Ideas, preferably to others, as foreseeing they may have frequent Occasion, to take Notice of such precise Combinations. And because it would be tedious in Conversation, every time these complex Notions occur, to enumerate all the Ideas of which they consist; therefore, for the Sake of Ease and Dispatch, they give them particular Names, and thereby render the Compositions fixed and permanent.

The Necessity of mutual Interchange, and Mens particular Aims in Life, a great Source of complex Ideas.

XVII. THAT it is in this Manner we come by our complex Ideas, which multiply upon us, according as the Exigencies of Society require, or our Pursuits, Method of Life, and different Aims, throw Occasions in our Way, of combining such and such Perceptions together, might be easily made appear, by a short View of the Combinations themselves. Human Actions, as occurring most frequently, and affording large Matter of Conversation, Debate, and Enquiry among Men, have been very nicely modified, and distinguished into Classes, according to the several Circumstances most likely to attend them. In like manner, the Arts and Sciences, in proportion as they are cultivated, leading us into many compound Views of things, which otherwise would never offer themselves to the Consideration of the Mind; the complex Ideas of this Sort, with the Names by which they are expressed, are we find, the Work of such particular Nations, where these Arts and Sciences have chiefly flourished. The *Greeks* for Instance, excelled in Learning and polite Knowledge; hence many of the Terms belonging to Rhetorick, Poetry, Philosophy, Physick, &c. come originally from their Language. Modern Fortification has received its greatest Improvements among the *French*; and accordingly, the Ideas and Terms of the Art, are mostly derived from Writers of that Nation. In *Italy*; Architecture, Musick, and Painting, have been the great Exercise of the Men of Genius: it is therefore among them, that we find the several complex Notions, belonging to these Parts of Study, as well as the Names by which they are expressed; nor can we discourse accurately and minutely of the above-mentioned Arts, without having Recourse to the Language



OF PERCEPTION.

37

of that Climate. And if we descend into the particular Callings and Professions of Men, they have all their several Collections of Ideas, distinguished by their several Names, and hardly known, but to such as are conversant in that manner of Life. Thus *Calcination, Cobabation, Filtration*, &c. are Words standing for complex Ideas, freely framed in the Minds of Chymists, and therefore familiar to Men of that Employment. Yet as these, and such Combinations, seldom occur in common Life, the Generals of Mankind we see, are in a great measure unacquainted with them.

III. I MIGHT pursue these Speculations further, and shew how the several Fashions, Customs, and Manners of one Nation, leading to form many complex Notions, which are not so naturally in the way of another; that different Sets of Ideas prevail in different Countries, and of course have Names appropriated to them in one Language, to which there are no Words that answer in another. The Pro-

Hence different Sets of Ideas prevail in different Countries, and Words in one Language have none to answer them in another.

cedure and Forms of our Courts of Justice, have introduced new Terms into the *English Law*, which stand for Collections of Ideas, framed among no other People. Nor would it be possible to render these Terms, by any single Words of another Language; because where the Ideas themselves prevail, there are no Names provided to express them. In consequence therefore, it becomes necessary to use Circumlocution, and enumerate the several Ideas comprehended in the Notion, if we would so express ourselves, as to be understood in the Language of other Nations. Nay, even among the same People, the Change of Customs and Opinions continually brings new Sets of Ideas, which of course must be distinguished by particular Names, while at the same time, Notions of former Ages grow into Disuse, and the Words answering them are either wholly laid aside, or employed in a Signification different from what they had before.

Thus Languages are in a perpetual Flux, and by degrees vary so much from their original Frame, as to become unintelligible, even to the Descendants of those who speak them. We run back into the Ages of Chivalry in *England*, when Tilts and Tournaments were in Fashion; how complex Ideas, peculiar to that Mode of Life, shall we be familiar among the Men of those Times, which are now known or attended to? On the contrary, the Improve-

This too the Cause that Languages are in a perpetual Flux.

38 *Of SIMPLE APPREHENSION,* Book I.

ments in Arts and Sciences, that have since taken place, have led us into innumerable Views of Things, to which our Forefathers were perfect Strangers. But I shall not push these Reflections any farther, believing that what has been said, will be sufficient to shew, the Original and Progress of our compound Ideas, and how the Mind is directed in the Choice of the Combinations it makes. We therefore proceed to the Consideration of abstract Ideas, which make the Subject of the following Section.

S E C T. II.

Of Abstract or Universal Ideas.

*General Ideas
formed by the
Abstraction of
the Mind.*

I. **H**AVING dispatched what was necessary to be said, concerning our compound Ideas, considered merely as they are Combinations of the Understanding, it is now time to explain how we come by our general Notions, which serve to represent to us a Multitude of Individuals, and are the Standards by which we rank Things into Sorts. And this, as we have before intimated, is done by the Abstraction of the Mind; which Act may be extended to all our Ideas, whether simple, compound, or of Substances. If for Instance, we fix our Attention on any particular Colour, as Scarlet, we can leave out the Consideration of all present Circumstances, as the Subject in which it inheres, the Time and Place of seeing it, &c. and retaining only the Impression itself, make it a Representative of that Quality or Appearance, wherever we chance to meet with it. It is thus that abstract and universal Ideas are framed; for the Mind regarding only the scarlet Colour, which one Day it observes perhaps in a Piece of Cloth, another in a Picture, and a third in the Rainbow; the Appearance is conceived to be the same in all these Objects, and therefore is called by the same Name.

*All the Per-
ceptions of the
Understanding
particular.*

II. **B**UT to enter a little more closely into this Matter, and shew that these our general Conceptions are the mere Creatures of the Understanding; it may not be amiss to take notice, that all our Perceptions of Things, whether we derive them

them from Sensation or Reflection, are of their own Nature particular, and represent to us single determinate Objects. When we see a Horse, for Instance, in the Fields, our Idea is that of an Individual. If we hear a Sound, it is something particular, and different from what we hear at any other time. Every Perception of the Mind is distinct from every other Perception; nay, and every Idea brought into view by the Imagination, as when we frame the Image of a Lion standing before us, is still singular, and represents a single Object.

III. BUT when we come to take a View of these several Particulars, we readily observe among some of them a Resemblance, and framing to ourselves an Idea of those Things, in which any of them are found to agree, we thereby get a general Notion, applicable to many Individuals.

The Idea of the Species represents what is common to different Individuals.

Thus *Horses* are found to resemble one another, in Shape, Voice, and Structure of Parts. The Idea which takes in only the Particulars of this Resemblance, excluding what is peculiar to each single Animal, becomes of course common to all Creatures of that Kind, and is therefore the Representative of a whole Class of Beings. Accordingly the Name of that general Idea, is given to every Animal, in which that Shape, Voice, and Structure is found; for the Word *Horse*, implying only these Particulars, must belong to all Creatures wherein they exist. This is the first Step or Gradation in the forming of abstract Notions, when the Mind confines itself to the Consideration of Individuals, and frames an Idea that comprehends such only under it. The Rank or Class of Things answering to this Idea, is called *Species* in the Language of the Schools. So a Horse is a certain *Species* of Animals, an Oak is a *Species* of Trees, and a Square is a *Species* of four-sided Figures.

IV. WHEN we have thus learnt to rank Individuals into Sorts and Classes according to the Resemblance found among them, the Mind proceeds next to consider the Species themselves, and often in these too observes a certain Likeness. Whereupon throwing out all those Particulars, wherein the several Species are found to disagree, and retaining only such as are common to them all, we thereby frame a still more general Idea, comprehending under it a Variety of different Species. Thus a Sparrow, a Hawk, an Eagle, &c. are distinct Species of Birds, which have each their peculiar Shape and Make. They nevertheless resemble

The Idea of the Genus represents what is common to several Species.

one another, in being covered with Feathers, and provided with Wings, that bear them through the Air. Out of these Particulars we form a new Idea, including all the common Properties of the feathered Kind, and appropriating to it the Name *Bird*, mark by that Word, another Class of Things, of a higher Order than any of the former. This superior Division, which extends to several Species at once, is called in the Schools the *Genus*, and is the second Step the Mind takes in advancing to universal Notions.

*The Mind
may advance
by manifold
Gradations,
in rising from
Particulars to
Generals.*

V. AND thus have I given a short, but I hope intelligible Account, of the Business of *Genera* and *Species*, about which so much has been said in the Writings of Logicians. *Species* in Strictness and Propriety of Speech, is such a Rank or Class of Things, as comprehends under it only Individuals; *Genus* advances still higher, and takes in a Variety of distinct Species. It is however to be observed, that the Mind, in rising from Particulars to Generals, does not confine itself to one or two Gradations, but may carry its Views through the whole Extent of Things, until at length it arrive at an Idea, embracing the universal Compass of Nature. For when we have ranked Things into Sorts, and reduced these again to the higher Order or *Genus*, these *Genera* are still found to resemble one another in some Particulars; which being collected into one Idea, form a new and more comprehensive Division of Things. Thus *Bird* is a *Genus*, embracing all the Varieties of the feathered Kind. *Fish* implies the several Species of living Creatures which inhabit the Waters. *Quadruped* and *Insect* are also universal Ideas, that take in many inferior Distributions and Classes. Yet all these different Orders of Being, have this in common; that they are provided with organical Bodies, fitted for the Purposes of Life and spontaneous Motion. An Idea therefore comprehending only these last Particulars, will equally belong to all the Divisions before enumerated, and the Word *Animal*, by which it is expressed, becomes a general Name for the several Creatures indued with Life, Sense, and spontaneous Motion. If we are for carrying our Views still farther, and framing a yet more universal Notion, we can cast our Eyes upon both the animate and inanimate Parts of Nature; wherein we find this mutual Correspondence, that they exist and continue in Being. This last Idea therefore of *Being* in general, comprehends under it all the Varieties of Things, and may be universally applied to whatever has either Life or Existence; so that in respect of the present
Frame

Frame of Nature, it is the highest and most universal Idea we have.

VI. IN this Series of Notions, rising one above another in the Degree of Universality ; that Division, which comprehends under it several Genera, is called in the Schools the *higher Genus* ; which Denomination continues, until we arrive at the last Advance of the Understanding, when being come to the most general of all Ideas, that admits not of a superior, it is distinguished by the Name of the *Genus generalissimum*. In like manner, the several Genera comprehended under a higher Genus, are in respect of it considered as *Species* ; and as these last too have Species under them, the inferior Divisions, are for Distinction's sake termed *lower Species*. Thus the Progression continues, and when we come to the lowest Subdivision of all, comprehending only Individuals, which as I have before intimated, constitutes the proper Species, this the Schools denominate the *Species specialissima*. All that lie between it and the highest Distribution of Things, are the intermediate Genera and Species, which are termed each in their turn, *Genus generalius*, or *Species specialior*, according as we consider them in the ascending or descending Scale of our Ideas ; or, to speak in the Language of Logicians, according to their Ascent or Descent in *Linea prædicamentali*. I should not have entered so far into these verbal Disquisitions, had not the Terms here explained, been such as frequently occur in the Writings of Philosophers ; inasmuch that without some Knowledge of them, we must often be at a Loss, in the Prosecution of these Studies. Besides, it is both curious and useful, to see the gradual Progress of the Mind, in its Advances from particular to general Conceptions ; to observe it ranging its Ideas into Classes, and establishing a just and regular Subordination in its Views and Notices of Things. This is the shortest Way to Knowledge, and affords the best Means of preserving the Order and due Connection of our Thoughts, so as to make them subservient to the Increase of Science. For when we see how Things comprehend, or are comprehended in one another, we are able to discover the mutual Dependence of all the several Branches of Knowledge, which leads us into the true and natural Method, of conducting our Understandings in the Search of Truth.

Whence many intermediate Steps between the highest Genus and lowest Species.

VII. FROM what has been said it is evident, that general Ideas are the Creatures and Inventions of the Understanding. Nature it is true, in the Production of Things, makes many

General Ideas the Creatures of the Understanding.

of

42 Of SIMPLE APPREHENSION, Book I.

of them alike; but it is the Mind alone, that collects the Particulars in which they agree, into one Idea, and sets it up as a Representative of many Individuals. And now I think we may venture upon that much-agitated Question, Where do the Genera and Species of Things exist? To which I answer, in the Mind. *Universality* belongs not to Things themselves, it being apparent, that they are all particular in their Existence. However, as they often have many Properties in common, the Understanding by uniting these into one Conception, obtains a general Idea, under which it ranks all the several Objects wherein all these Properties are found. So far indeed we must allow, that the particular Combination of Properties, which constitutes the Genus and Species, exists in all the Individuals referred to that Genus or Species; but then it is in Conjunction with other Properties, by which these Individuals are distinguished from one another. Thus the Collection of simple Ideas, signified by the Word *Bird*, is to be found for instance in a *Hawk*, or any other single Animal, to which we apply that general Name; but the Notion itself, abstracted from all the Particulars to which it belongs, has evidently no Existence out of the Understanding. There is not a Being in Nature that can be called a *Bird* in general, or that does not necessarily imply, in the very Conception of it, several simple Ideas, besides those marked by that Word. For the Name in this Case signifies no more, than an Animal covered with Feathers, and provided with Wings, without Regard either to Shape, Bulk, or the particular Time and Place of its Existence. These last Considerations however, are inseparable from the Reality of Things, and therefore must be added to the general Idea, before we can conceive any thing conformable to it actually brought into Being.

Considered apart they exist only in the Mind, but in Conjunction with other Ideas in the Individuals comprehended under them.

VIII. HENCE we see at once, what sort of an Existence general Natures have. Considered apart, and by themselves, they are wholly the Workmanship of the Understanding, and derive their Being and Reality from it; but viewed in Conjunction with other Ideas, that co-exist with them in the several Objects of Nature, they are to be found in the Individuals to which they refer; and therefore according to this way of Conception, may be said to have an Existence in them. Thus, so long as the Ideas answering to the Words *Man* or *Tree*, continue general and undetermined, they have no real Objects answering them in Nature;

Nature; nor can the Collections of simple Ideas, marked by these Names, while others are supposed excluded, exist any where out of the Understanding. Nevertheless, as all the simple Ideas included in the general Notion of *Man*, are to be found in every particular *Man*; and all those implied in the Notion of a *Tree*, in every particular *Tree*; hence the general Nature of *Man*, exists in every individual *Man*, as does the general Nature of a *Tree*, in every individual *Tree*.

IX. ONE Thing still remains to be observed, with regard to these our general Ideas; that though many of them are evidently Combinations of different simple Ideas, and according to that Way of considering them, are included in the first Division of our complex Conceptions, those namely framed by the Composition of the Mind; yet we are carefully to distinguish between an Idea as it is compound, and as it is universal. In the first Case, the Mind chiefly considers the several Ideas that are combined together; or in other Words, all the Attributes, Qualities, or Parts, that are contained in any Idea. Thus the Idea of a *Bird*, includes Life, Sense, spontaneous Motion, a Covering of Feathers, Wings, &c. none of which can be left out, without destroying the very Nature of the Idea, and making it something quite different from what it was before. This Way of considering Things, according to the Number of their Parts and Properties, is called by Logicians the *Comprehension* of an Idea. But the *Universality* of our Notions implies quite another Turn of Thinking, inasmuch as it fixes the Regard of the Mind, upon the Subjects to which our Ideas extend, or the Individuals and Species comprehended under them. In this Sense the Idea answering to the Word *Bird*, takes in the several Species of the feathered Creation, the *Hawk*, the *Eagle*, *Sparrow*, *Lark*, and innumerable others, to all which it may with equal Propriety be applied. And here it is remarkable, that the Idea loses nothing of its Force or *Comprehension*, by being restricted to a particular Kind. When I say the *Bird of Jove*, though in this Case the Idea is restrained to the *Eagle* alone, it still remains as distinct, and includes as many simple Ideas in its Composition, as when before it was extended to all the different Tribes of feathered Animals.

Difference of Ideas considered as compound and as universal.

X. WE see therefore that our compound Ideas, may continue the same in respect of their Attributes, or the Number of Parts, and yet vary considerably in the Degree of Universality. The general Idea of *Man* is the same, whether applied

The Comprehension and Extension of our Ideas.

to the whole human Race, or those of any particular Nation. When I affirm for instance of Mankind in general, that their Knowledge falls short of Perfection, and afterwards make the like Observation of the Men of the present Age ; in both Cases, the Word *Man* stands for one and the same Collection of simple Ideas ; but in respect of the Individuals to which it is applied, there is a great and manifest Difference. That is, the Term *Man*, denotes one invariable compound Idea ; which notwithstanding, considered as a general Notion, may be contracted or enlarged at pleasure. And as in the former Case, the several Parts of the compound Idea, is called its *Comprehension* ; so in the latter, the Individuals to which the universal Idea is applied, is called its *Extension*. I might add many more Observations on this Subject, but chuse rather to stop here, having said enough to explain the Difference between compound and abstract Ideas, and shew the Reason of my ranging them under distinct Heads.

S E C T. III.

Of our Ideas of Relations.

Ideas of Relations exceeding our natural faculties.

I. I COME now to the third and last Division of those Ideas, which I consider as the Creatures and Workmanship of the Understanding ; such namely as arise, from the comparing of Things one with another. For the Mind in its Views, is not tied to single Objects ; but can examine their References and Respects, in regard to others, brought under Consideration at the same time. And when it does so, and thence derives new Notices of Things, the Ideas thus got are called Relations, and make I am apt to think the largest Class of all our Perceptions. For every single Object will admit of almost innumerable Comparisons with others, and in this Sense may become a very plentiful Source of Ideas to the Understanding. Thus if we compare one thing with another in respect of *Bulk*, we get the Ideas of *greater*, *less*, or *Equality* ; if in respect of *Time*, of *elder* and *younger* ; and so for other Relations, which we can pursue at pleasure, almost without End ; whence it is easy to conceive, how very extensive this Tribe of our Perceptions must be.

II. I

II. I SHALL not pretend to trace out these Ideas particularly, nor indeed so much as to enumerate their several Divisions; it being enough to observe, that here, as well as in the other kinds of our complex Ideas, we bound ourselves for the most part to such Comparisons, as the Exigencies of Society, the Wants of Life, and the different Professions of Men, render necessary; and are more or less accurate in tracing out the Relations of Things, according to the Degree of Importance they appear to have in these Respects. The Relations of Men one to another, arising either from the Ties of Blood, their several Ranks and Places in the Community, or a mutual Intercourse of good Offices, being of great Weight and Concern in the Commerce of Life, have in a particular Manner engaged our Attention, and are therefore very minutely described. For the same Reason, Men have found it necessary, to determine as exactly as possible, the various Dependence of Things, as their Happiness is nearly connected with this Knowledge. When we consider Objects merely in respect of Existence, as either giving or receiving it, we come by the Ideas of *Cause* and *Effect*: Nor need I mention, how much the Welfare of Mankind depends, upon an extensive View of Things, as they stand connected in this Relation; it being evident, that the several Schemes and Purposes of Life, are all conducted upon a previous Supposition, that certain known Causes, will have their usual regular Effects, and such and such Actions, be attended with such and such Consequences.

Men chiefly determined to particular Comparisons by the Wants and Exigencies of Life.

III. BUT there are other Relations of this kind, besides those that merely regard Existence; as when we also take into the Account, the additional Gifts, of a Capacity for Happiness, and the Means of attaining it; which constitutes the Relation of *Creator* and *Creature*, in the more solemn Acceptation of these Words. Again, when we consider the great Author of our Being, not only as the Creator of the Universe, but also as preserving and holding it together, and presiding over the present Frame of Things with uncontrouled Dominion; he then appears under the Notion of a *moral Governor*, to whom we are accountable for our Actions, and the Use we make of those Powers and Faculties we derive from him. Now as it is of the highest Consequence for Men, not to be unacquainted with these, and such like Relations; hence we find, that the wisest Nations, and such as best understood the true

Relations of Creator and Creature, &c.

Application

Application of the Powers of the Mind, have always made it their chief Study, to regulate and ascertain these Ideas, and trace them in all their Consequences. And thus we may in some measure perceive, how the Mind proceeds in comparing its Ideas together, and by what Views it is chiefly governed, in framing the complex Notions of this Class, by which it represents the various Habitudes of Things. I shall only add upon this Subject, these two Observations.

Our Ideas of Relations very clear and distinct.

IV. FIRST that our Ideas of Relations are for the most part very clear and distinct. For the comparing of things together, being a voluntary Act of the Mind, we cannot but suppose, that it must be acquainted with its own Views in the Comparison; and of course, have a clear Conception of the Foundation of that Relation, it sets itself to enquire into. Thus the Relation of Cause and Effect, implying only that one thing produces, or is produced by another, which Notions are always distinctly settled in the Understanding, before it goes about to make the Comparison; it is evident, that the Idea representing this mutual Respect of Objects, will be no less clear, than are the Notions themselves, upon which the Relation is founded. And what is still more remarkable of the Ideas of this Class; they cease not to be distinct, even where the Subjects compared are but very imperfectly known. For I can well enough conceive that one thing has produced another, and that therefore they stand related as Cause and Effect, though my Ideas of the things themselves may perhaps be very obscure, and come far short of representing their real Nature and Properties. I doubt not but it will be readily owned, that our Idea of the Universe, considered as comprehending the whole Frame of created Things, is very inadequate; and I think it is still more apparent, that our Notion of the Supreme Being, comes not up to the Excellence and Perfection of his Nature. Yet we very well understand what is meant, by calling God the Author of the World; and though we comprehend not the Manner of his producing it, find no Difficulty in framing the Ideas, the relative Words *Creator* and *Creature* stand for

Idea of Relations among the most important Conceptions of the Mind.

V. I HAVE yet another Observation to make upon this Subject; and it is, that our Ideas of Relations, are among the most important Conceptions of the Understanding, and afford the largest Field, for the Exercise and Improvement of human Knowledge. Most of our Enquiries regard

regard relative Ideas, and are set on foot with a View to investigate the mutual Habitudes of Things. The Mathematician has taken Quantity for his Province, and teaches how to compare Magnitudes of different Figures and Dimensions, in order to judge with Certainty of their relative Properties. The Philosopher attaches himself to the Chain of Causes and Effects, and endeavours to trace out the various Dependence of Things considered in this Light. In fine, whither do all our Researches tend, but by means of certain known Properties and Relations, to find out others that stand some how connected with them? As for the Importance of these Conceptions, no one can call that in Question, who reflects; that from our Relations to our Creator and one another, arise all the Duties of Morality and Religion; and that the Correspondence of the several Objects of Nature, to the Organs of the Body, and Faculties of the Mind, is that by which alone we can judge, of what will procure us Happiness or Misery. Whence it is evident, that without an exact Knowledge of these Relations, we must wander on in Life with great Uncertainty, and may often plunge into Calamities and Misfortunes, by those very Pursuits, from which we expected nothing but Joy and Pleasure.

VI. THUS have I gone through the several Divisions of our Ideas, which I have endeavoured to represent in such a Manner, as their vast Extent may most easily appear, and the Conduct of the Mind in framing them be distinctly apprehended. I might easily run into other Distinctions, by considering them as *clear* or *obscure*, *adequate* or *inadequate*, *true* or *false*. But the Limits of this Tract will not allow my entering more fully into the Subject, and I think it the less needful, because the very Names are almost sufficient, to convey a Notion of these several Kinds of Ideas into the Mind. But as the Division explained above seems to be of great Importance, towards settling in the Understanding a just View of the Progress of human Knowledge, and the Steps by which it advances from one Degree of Improvement to another, I shall here run over it again in as few Words as possible, that the whole Process may be seen at once. Our Ideas are all derived into the Understanding, either by Sensation, or Reflection. This however is observable, that one and the same Object often excites a Variety of Perceptions at once, which are nevertheless readily distinguished by the Mind, and appear each under a Form peculiar to itself. These constitute our primary and original Notices, and are easily known from

all

Recapitulation.

48 Of SIMPLE APPREHENSION, Book I:

all others, inasmuch as they are entirely void of Plurality, and cannot be divided into two or more different Ideas. They are also the Materials out of which the others are formed, and are therefore by Way of Distinction called simple Ideas. But the Mind, though it has no Power over these, either to fashion or destroy them, can yet combine them in an infinite Number of Ways; and from their various Combinations, result all our complex Ideas, which are of two principal Kinds. First such as are derived from without, and represent those Combinations of simple Ideas, that have a real Existence in Nature. Of this Sort are all our Ideas of Substances. Secondly the Conceptions formed by the Mind itself, arbitrarily uniting and putting together its Ideas. And as this makes by far the largest Class, and comprehends all those Ideas, which may be properly termed our own, as being the real Workmanship of the Understanding; so they fall very naturally under three distinct Heads. For either the Mind combines several simple Ideas together, in order to form them into one Conception, in which the Number and Quality of the Ideas united, are principally consider'd; and thus it is we come by all our *compound* Notions: or it fixes upon any of its Ideas, whether simple, compound, or of Substances, and leaving out the Circumstances of Time, Place, real Existence, and whatever renders it particular, considers the Appearance alone, and makes that a Representative of all of the Kind; whence our *abstract* and *universal* Ideas are derived: or lastly, it compares things one with another, examines their mutual Connections, and thereby furnishes itself with a new Set of Notions, known by the Name of *Relations*; which as has been already remarked, make by no means the least important Class of our Perceptions. This Division of our Ideas, as it seems to be the most natural, and truly to represent the Manner in which they are introduced into the Mind, so I believe it will be found to comprehend them in all their Varieties. I shall therefore now proceed to offer some Observations upon Language, as being the great Instrument, by which we are enabled to make our Ideas and Perceptions known to others.

CHAP. V.

Of Words considered as the Signs of our Ideas.

I. **W**E have seen how the Mind comes to be first furnished with Ideas, and by what Methods it contrives to diversify and enlarge its Stock; let us now consider the Means of making known our Thoughts to others, that we may not only understand how Knowledge is acquired, but also in what Manner it may be communicated with the greatest Certainty and Advantage. For our Ideas, though manifold and various, are nevertheless all within our own Breasts, invisible to others, nor can of themselves be made appear. But God designing us for Society, and to have Fellowship with those of our Kind, has provided us with Organs fitted to frame articulate Sounds, and given us also a Capacity of using those Sounds, as Signs of internal Conceptions. Hence spring Words and Language; for having once pitched upon any Sound, to stand as the Mark of an Idea in the Mind, Custom by Degrees establishes such a Connection between them, that the Appearance of the Idea in the Understanding, always brings to our Remembrance the Sound or Name by which it is expressed; as in like manner the hearing of the Sound, never fails to excite the Idea for which it is made to stand. And thus it is easy to conceive, how a Man may record his own Thoughts, and bring them again into View in any succeeding Period of Life. For this Connection being once settled, as the same Sounds will always serve to excite the same Ideas; if he can but contrive to register his Words in the Order and Disposition, in which the present Train of his Thoughts presents them to his Imagination; it is evident he will be able to recall these Thoughts at Pleasure, and that too in the very Manner of their first Appearance. Accordingly we find, that the Inventions of Writing and Printing, by enabling us to fix and perpetuate such perishable things as Sounds, have also furnished us with the Means of giving a Kind of Permanency to the Transactions of the Mind, in so much that they may be in the same Manner subjected to our Review, as any other abiding Objects of Nature.

Words furnish the Means of recording our own Thoughts

*And of the
mutual Com-
munication of
Knowledge
from one Man
to another.*

II. BUT besides the Ability of recording our own Thoughts, there is this further Advantage in the Use of external Signs, that they enable us to communicate our Sentiments to others, and also receive Information of what passes in their Breasts. For any Number of Men, having agreed to establish the same Sounds as Signs of the same Ideas, it is apparent that the Repetition of these Sounds must excite the like Perceptions in each, and create a perfect Correspondence of Thoughts. When for instance, any Train of Ideas, succeed one another in my Mind, if the Names by which I am wont to express them, have been annexed by those with whom I converse, to the very same Set of Ideas, nothing is more evident, than that by repeating those Names according to the Tenor of my present Conceptions, I shall raise in their Minds the same Course of Thought as has taken Possession of my own. Hence, by barely attending to what passes within themselves, they will also become acquainted with the Ideas in my Understanding, and have them in a manner laid before their View. So that we here clearly perceive, how a Man may communicate his Sentiments, Knowledge, and Discoveries to others, if the Language in which he converses, be extensive enough to mark all the Ideas and Transactions of his Mind. But as this is not always the Case, and Men are often obliged to invent Terms of their own, to express new Views and Conceptions of Things; it may be asked, how in these Circumstances we can become acquainted with the Thoughts of another, when he makes use of Words, to which we have never annexed any Ideas, and that of course can raise no Perceptions in our Minds. Now in order to unveil this Mystery, and give some little Insight into the Foundation, Growth, and Improvement of Language, the following Observations will, I am apt to think, be found of considerable Moment.

*Simple Ideas
cannot be con-
veyed by Words
till they are
distinctly
perceived.*

III. FIRST, that no Word can be to any Man the Sign of an Idea, till that Idea comes to have a real Existence in his Mind. For Names being only so far intelligible, as they denote known internal Conceptions, where they have none such to answer them, there they are plainly Sounds without Signification, and of course convey no Instruction or Knowledge. But no sooner are the Ideas to which they belong raised in the Understanding, than finding it easy to connect them with the established Names,

we

we can join in any Agreement of this Kind made by others, and thereby enjoy the Benefit of their Discoveries. The first thing therefore to be consider'd is, how these Ideas may be conveyed into the Mind; that being there, we may learn to connect them with their appropriated Sounds, and so become capable of understanding others, when they make use of these Sounds in laying open and communicating their Thoughts. Now to comprehend this distinctly it will be necessary to call to mind, the before-mentioned Division of our Ideas into simple and complex. And first as for our simple Ideas, it has been already observed, that they can find no Admission into the Mind, but by the two original Fountains of Knowledge, Sensation and Reflection. If therefore any of these have as yet no Being in the Understanding, it is impossible by Words or a Description to excite them there. A Man who had never felt the Impression of *Heat*, could not be brought to comprehend that Sensation, by any thing we might say to explain it. If we would really produce the Idea in him, it must be by applying the proper Object to his Senses, and bringing him within the Influence of a hot Body. When this is done, and Experience has taught him the Perception to which Men have annexed the Name *Heat*, it then becomes to him the Sign of that Idea, and he thenceforth understands the Meaning of a Term, which before, all the Words in the World would not have been sufficient to convey into his Mind. The Case is the same in respect of Light and Colours. A Man born blind, and thereby deprived of the only Conveyance for the Ideas of this Class, can never be brought to understand the Names by which they are expressed. The Reason is plain: they stand for Ideas that have no Existence in his Mind; and as the Organ appropriated to their Reception is wanting, all other Contrivances are vain, nor can they by any Force of Description be raised in his Imagination. But it is quite otherwise in our complex Notions. For these being no more than certain Combinations of simple Ideas, put together in various Forms; if the original Ideas out of which the Collections are made have already got Admission into the Understanding, and the Names serving to express them are known; it will be easy, by enumerating the several Ideas concerned in the Composition, and marking the Order and Manner in which they are united, to raise any complex Conception in the Mind. Thus the Idea answering to the Word *Rainbow*, may be readily excited in the Imagination of another, who has never seen the Appearance itself, by barely describing the Figure, Largeness,

Position, and Order of Colours ; if we suppose these several simple Ideas, with their Names, sufficiently known to him.

IV. AND this naturally leads me to a second Observation upon this Subject, namely : that Words standing for complex Ideas are all definable, but those by which we denote simple Ideas are not. For the Perceptions of this latter Class having no other Entrance into the Mind, than by Sensation or Reflection ; can only be got by Experience, from the several Objects of Nature, proper to produce those Perceptions in us. Words indeed may very well serve to remind us of them, if they have already found Admission into the Understanding, and their Connection with the established Names is known ; but they can never give them their original Being and Existence there. And hence it is, that when any one asks the Meaning of a Word denoting a simple Idea, we pretend not to explain it to him by a Definition, well knowing that to be impossible ; but supposing him already acquainted with the Idea, and only ignorant of the Name by which it is called, we either mention it to him by some other Name, with which we presume he knows its Connection, or appeal to the Object where the Idea itself is found. Thus was any one to ask the Meaning of the Word *White*, we should tell him it stood for the same Idea as *Albus* in *Latin*, or *Blanc* in *French* ; or if we thought him a Stranger to these Languages, might appeal to an Object producing the Idea, by saying it denoted the Colour we observe in *Snow* or *Milk*. But this is by no means a Definition of the Word, exciting a new Idea in his Understanding ; but merely a Contrivance to remind him of a known Idea, and teach him its Connection with the established Name. For if the Ideas after which he enquires, has never yet been raised in his Mind ; as suppose one who had seen no other Colours than *Black* and *White*, should ask the Meaning of the Word *Scarlet* ; it is easy to perceive, that it would be no more possible to make him comprehend it by Words or a Definition, than to discourse the same Perception into the Imagination of a Man born blind. The only Method in this Case is, to present some Object, by looking at which the Perception itself may be excited, and thus he will learn both the Name and the Idea together.

*Experience
and Observa-
tion bring
Men to an Ac-
quaintance in
the Names of
simple Ideas.*

V. SHOULD any one's Curiosity now prompt him to enquire, how it comes to pass, that Men agree in the Names of their simple Ideas, seeing they cannot view the Perceptions in one another's Minds, nor make known these Perceptions by Words to others ; I answer, that the Effect

Effect here mentioned, is produced by Experience and Observation. Thus finding for instance that the Name *Heat*, is annexed to that Impression which Men feel when they approach the Fire, I make it also the Sign of the Idea excited in me by such an Approach, nor have any doubt but it denotes the same Perception in my Mind as in theirs. For we are naturally led to imagine, that the same Objects operate alike upon the Organs of the human Body, and produce an Uniformity of Sensations. No Man fancies, that the Idea raised in him by the Taste of *Sugar*, and which he calls *Sweetness*, differs from that excited in another by the like Means; or that *Warmwood*, to whose Relish he has given the Epithet *Bitter*, produces in others the Sensation which he denotes by the Word *Sweet*. Presuming therefore upon this Conformity of Perceptions, when they arise from the same Objects, we easily agree as to the Names of our simple Ideas; and if at any time, by a more narrow Scrutiny into things, new Ideas of this Class come in our way, which we chuse to express by Terms of our own Invention; these Names are explained, not by a Definition, but by referring to the Objects, whence the Ideas themselves may be obtained.

VI. BEING in this manner furnished with simple Ideas, and the Names by which they are expressed, the Meaning of Terms that stand for complex Ideas is easily got; because the Ideas themselves answering to these Terms, may be conveyed into the Mind by Definitions. For our complex Notions, as was already observed, are only certain Combinations of simple Ideas.

The Conveyance of complex Ideas by Definitions, a wise Contrivance in Nature.

When therefore these are enumerated, and the Manner in which they are united into one Conception explained, nothing more is wanting to raise that Conception in the Understanding; and thus the Term denoting it comes of course to be understood. And here it is worth while to reflect a little upon the wise Contrivance of Nature, in thus furnishing us with the very aptest Means of communicating our Thoughts. For were it not so ordered, that we could thus convey our complex Ideas from one to another by Definitions, it would in many Cases be impossible to make them known at all. This is apparent in those Ideas which are the proper Work of the Mind. For as they exist only in the Understanding, and have no real Objects in Nature in Conformity to which they are framed; if we could not make them known by Description, they must lie for

ever hid within our own Breasts, and be confined to the narrow Acquaintance of a single Mind. All the fine Scenes, that rise from time to time in the Poet's Fancy, and by his lively Painting give such Entertainment to his Readers; were he destitute of this Faculty, of laying them open to the View of others by Words and Description; could not extend their Influence beyond his own Imagination, or give Joy to any but the original Inventor.

*And of great
Use and Im-
portance to the
Progress of
Knowledge.*

VII. THERE is this farther Advantage, in the Ability we enjoy, of communicating our complex Notions by Definitions; that as these make by far the largest Class of our Ideas, and most frequently occur in the Progress and Improvement of Knowledge; so they are by this means imparted with the greatest Readiness, than which nothing could tend more to the Increase and spreading of Science. For a Definition is soon perused, and if the Terms of it are well understood, the Idea itself finds an easy Admission into the Mind. Whereas in simple Perceptions, where we are referred to the Objects producing them, if these cannot be come at, as is sometimes the Case, the Names by which they are expressed must remain empty Sounds. But new Ideas of this Class occurring very rarely in the Sciences, they seldom create any great Obstruction. It is otherwise with our complex Notions; for every Step we take, leading us into new Combinations and Views of Things, it becomes necessary to explain these to others, before they can be made acquainted with our Discoveries. And as the Manner of Definitions is easy, requiring no Apparatus but that of Words, which are always ready, and at hand; hence we can with the less Difficulty, remove such Obstacles, as might arise from Terms of our own Invention, when they are made to stand for new complex Ideas, suggested to the Mind by some present Train of thinking. And thus at last we are let into the Mystery hinted at in the Beginning of this Chapter, viz. how we may become acquainted with the Thoughts of another, when he makes use of Words, to which we have as yet joined no Ideas. The Answer is obvious from what has been already said. If the Terms denote simple Perceptions, they must refer us to these Objects of Nature, whence the Perceptions themselves are to be obtained; but if they stand for complex Ideas, their Meaning may be explained by a Definition. As for the Names of simple Ideas, I shall here discuss them; it being judicious to take notice, that our Knowledge in this way, can be extended only by Experience and

and Observation. But the Theory of Definitions making a material Part of Logick, and being indeed of great Importance towards the Improvement of human Knowledge, it will be necessary to lay it a little more open to the View of the Reader.

VIII. COMPLEX Ideas are, as has been already said, no other than simple Ideas put together in various Forms. But then it is to be observed, that in making these Collections, the Mind is not always tied down to the immediate View of the simple Perceptions out of which they are framed. For if we suppose the Understanding already furnished with a considerable Stock of compound Notions, these again may be made the constituent Parts of others still more compounded, insomuch that the new Idea thence arising, may be termed a Combination of complex Conceptions. Thus the Idea annexed to the Word *Animal*, includes many Perceptions under it, as Life, Sense, spontaneous Motion, &c. In like manner by the Term *rational* we denote a Variety of simple Ideas. If now combining these two Conceptions together, we form the still more complex Notion of a rational Animal; the Idea thus got, is truly a Collection of compound Notices. In a Word, the same thing happens here as in Numbers, which we may consider not only as various Collections of Units, these being indeed their original and constituent Parts; but also as sometimes composed of other lesser Numbers, which all put together make up the respective Sums. Now in tracing any very large Number, when for the Ease of the Mind, we consider it at first as composed of various others still lesser: if we next take these lesser Parts to Pieces, and pursue them continually, until we arrive at the Units out of which they are composed; we thereby totally unravel the Collection, and being able to push our Researches no farther, rest satisfied in the View thus offered to the Understanding. Just so it is in the Examination of our complex Ideas. For when any very compound Notion comes under the Inspection of the Mind, in order to be traced to its first Principles; we begin with resolving it into other Ideas less complicated, and taking these again to Pieces one by one, still go on with the Search, until we have broken the whole into our first and simple Perceptions, beyond which the Pursuit cannot possible be carried. And this is the Reason, why I have all along called our simple Ideas, the Foundation and Ground-work of human Knowledge; because in unravelling the Conceptions of the Mind, we find

The Composition and Resolution of our complex Ideas.

ourselves at length bounded by these Ideas, which are indeed the last Resort of the Understanding.

*The Names of
simple Ideas
may be consid-
ered as the
Elementary
Parts of Lan-
guage.*

IX. FROM what has been said it will be easy to conceive, how in defining a Term, standing for any very complex Idea, other Terms may be introduced, that also denote compound Ideas, though of an inferior Class. For the first Idea being resolvable into others less complicated, the Definition which enumerates these component Ideas, must consist of the Names by which they are expressed. And if it so happen, that the Ideas of this second Class are also unknown, their Terms too ought to be still farther defined. In this manner may a Series of Definitions be carried on, until we arrive at the Names of simple Ideas, which not being definable, the Analysis must necessarily cease. And thus we see, that as our simple Ideas, are the Materials and Foundation of Knowledge, so the Names of simple Ideas, may be considered as the Elementary Parts of Language, beyond which we cannot trace the Meaning and Signification of Words. When we come to them, we suppose the Ideas they stand for already known, or if they are not, Experience alone must be consulted, and not Definitions or Explications. And here it is well worth our Notice, that as the Names of these our original Conceptions, constitute the primary and fundamental Articles of Speech, upon which the whole Superstructure of human Language is built, so they are of all others the least doubtful and uncertain in their Signification. Because standing each for one simple Perception, not precariously excited in the Mind, but the Effect of certain Powers in Things, fitted to produce that Sensation in us; there is no Danger of Error or Mistake. He that once knows *Sweetness* to be the Name of the Taste received from Sugar, *Whiteness* of the Colour in Snow or Milk, and *Heat* of the Sensation produced by approaching the Fire, will not be apt to misapply those Words, or annex them to Perceptions of a different Kind. And as the Names of complex Ideas, may all be resolved into these primitive Terms, it is apparent that we are sufficiently provided with the Means of communicating our Thoughts one to another; and that the Mistakes so frequently complained of on this Head, are wholly owing to ourselves, in not sufficiently defining the Terms we use, or perhaps not connecting them with clear and determinate Ideas.

C H A P. VI.

Of Definition and its several Kinds.

I. **H**AVING laid these Foundations, shewn what Words are, and what are not definable, and taught the Manner of resolving our Notions, as well as Language itself, into its first and original Principles; we now proceed to explain a little more particularly the Nature of a Definition, and the several Kinds made use of, according to the different Views Men have, in communicating their Thoughts one to another. Definitions are intended to make known the Meaning of Words standing for complex Ideas, and were we always careful to form those Ideas exactly in our Minds, and copy our Definitions from that Appearance, much of the Confusion and Obscurity complained of in Languages might be prevented. But unhappily for us we are by no means steady in the Application of Names, referring them sometimes to one thing, sometimes to another; which often creates great Uncertainty in their Signification, and obliges us to give a different Turn to our Definitions, according to the different Reference of the Terms defined. In order therefore to render this whole Matter as clear and obvious as possible, we shall first consider, to what it is that Names, in the Use of Language, are most commonly applied; and then from the Variety of this Application, endeavour to account for the several Methods of defining mentioned in the Writings of Logicians.

The Variety of Definitions proceeds from the various Application of Words.

II. **WORDS** then have manifestly a threefold Reference. First and more immediately, they denote the Idea in the Mind of him who uses them; and this is their true and proper Signification. When a Man speaks, it is that he may be understood, and the Words he employs to convey his Thoughts are such as by Use he has learnt to connect with the Ideas then present to his Mind. But because those with whom we converse, are also supposed to know the Meaning of the Terms we use, hence, Secondly, we consider our Words, as Signs likewise of the Ideas in their Minds; and this is the Foundation of what is called Propriety in Language, when Men take care to affix such Notions to their Words, as are commonly applied

Words have a threefold Reference; to our own Ideas, those of others, and the real Being of things.

applied to them by those of most Understanding in the Country where they live. The third and last Reference of Words, is to Things themselves. For many of our Ideas, are taken from the several Objects of Nature, wherewith we are surrounded; and being considered as Copies of things really existing, the Words by which they are expressed are often transferred from the Ideas themselves, to signify those Objects which they are supposed to represent. Thus the Word *Sun*, not only denotes the Idea excited in the Mind by that Sound, but is also frequently made to stand for the luminous Body itself, which inhabits the Center of this our Planetary System. Now according to this threefold Application of Names, their Definitions, and the Manner of explaining them, must be various; for it is one thing to unfold the Ideas in a Man's own Mind, another to describe them as they are supposed to make their Appearance in the Minds of others; and lastly, it is something still different, to draw Images or Pictures, that shall carry in them a Conformity to the Being and Reality of Things. But we shall treat of each in Order.

III. FIRST then, when we consider Words, as Signs of the Ideas in the Mind of him who uses them; a Definition is nothing else, but such an Explication of the Meaning of any Term, as that the complex Idea annexed to it by the Speaker, may be excited in the Understanding of him with whom he converses. And this is plainly no more than teaching the Connection of our Words and Ideas, that others may understand the Sense of our Expressions, and know distinctly what Notions we affix to the Terms we use. When we say for instance, that by the Word *Square*, we mean a Figure bounded by four equal Sides, joined together at right Angles; what is this but a Declaration, that the Idea of a quadrilateral, equilateral, rectangular Figure, is that which in Discourse or Writing, we connect with the Term *Square*? This is our kind of Definition, which Logicians call the *Definition of the Name*; because it discovers the Meaning of the Words or Names we make use of, by shewing the Ideas for which they stand. Now as Sounds are of themselves indifferent to signify any Ideas, hence it is plain, that the Definitions of Names are arbitrary, every Man having a Liberty to affix what Notion he pleases to his Words. But the Convenience of Communication making it necessary, for Men speaking the same Language, to agree a meaning as possible in

Definition of the Name teaches only the Connection of an Word and Idea, and are therefore arbitrary.

the Signification of Sounds, a Conformity has accordingly been studied. Nevertheless we find, that Differences will from time to time creep in, which must create great Confusion in Mens Discourses and Reasonings, if they are not careful to define their Terms, that their Signification may be kept fixed and steady, and lie always open to the View of the Mind. The Writings of the Mathematicians are a clear Proof, how much the Advancement of human Knowledge depends upon a right Use of Definitions. For as by means of them, they every where preserve the same determined Signification to their Words, hence there is little Dispute as to the Meaning of their Expressions, almost all Men understanding them in the same Sense. And thus it happens, that such as apply their Thoughts this way, having perfectly the same Views of Things, readily comprehend the Discoveries already made, and are thereby enabled, with joint Labour, and an exact Conformity of Notions, to carry on the Improvement of this Branch of Knowledge. And if Men in other Parts of Learning, were alike careful to fix the Meaning of their Terms, the Progress of Science must be greatly furthered, and all those verbal Disputes, that now so much interrupt the Course of our Improvement, might be prevented.

IV. THIS then ought to be our first Care, when we enter upon a Design of illustrating any particular Branch of Study; to ascertain our Ideas, and mark the Names by which they are expressed. And although Definitions of Words are indeed arbitrary, (for a Man may affix what Ideas he pleases to his Terms, nor can any one contest this Liberty with him,) yet it will be proper to conform as near as possible to common Acceptation, that thereby our Thoughts may find a more easy and ready Entrance into the Minds of others. If it should now be asked, what are the Rules of a good Definition? I answer, that as in Definitions of the Name, we aim at no more, than teaching the Connection of Words and Ideas; every Contrivance, by which we are enabled, to excite the Idea annexed to any Word in the Mind of another, will serve the Purpose of a Definition. Now the Ideas we join with our Words are of two kinds: either such as have reason to believe are already in the Minds of others, though perhaps they know not the Names by which they are called; or such as being new and of our own Formation, can no otherwise be made known than by a Description. In the first Case, there is no Necessity for laying open the Idea itself, because being already known, any

Definitions of the Names are always true and exact Definitions.

Contrivance

Contrivance to remind us of it is sufficient. When we say for instance, that a *Clock is an Instrument by which we measure the Hours of the Day*; it is plain, that the Idea answering to the Word *Clock*, is not here unfolded; but we being before-hand supposed to have an Idea of this Instrument, are only taught by what Name it is called. Now in this Sense, the Names of even simple Ideas may be defined. For by saying that *White* is the Colour we observe in Snow or Milk, *Heat* the Sensation produced by approaching the Fire, we sufficiently make known what Ideas we connect with the Terms *White* and *Heat*, which is the true Purpose of a Definition of the Name. Hence it appears, that many of those Explanations of Words, which Logicians call Definitions of the Name, are not Definitions in a true and proper Sense, that is, such Descriptions of Ideas, as would serve to excite them in the Mind of another, even supposing him before wholly unacquainted with them, but merely Contrivances to remind us of known Ideas, and teach us the Names by which they are called.

But only when they coincide with the Definition of the Thing.

V. BUT where the Ideas we join with our Words, are new and of our own Formation, there they are to be laid open by a Description. Because being supposed unknown to others, we must first raise them in their Minds, before they can learn to connect them with any particular Names. And here it is, that the *Definition of the Name* coincides with what Logicians call the *Definition of the Thing*, as in either Case we proceed, by unfolding the Idea itself, for which the Term defined stands. And indeed this alone is what constitutes a Definition, in the true and proper Sense of the Word, as will appear more fully afterwards, when we come to consider the Terms we use, as referred to the real Objects of Nature. We shall therefore postpone this Consideration of the Definition of the Name, till we come to treat of the Definition of the Thing, when it will more naturally fall in our way. It may not however be amiss to observe, that when we say the Definitions of the Name are arbitrary, we mean not that the Descriptions of Ideas are so too, For every Idea having a peculiar Appearance of its own, by which it is distinguished from all others, nothing is more evident, than that the Description must be such, as to exhibit that precise Conception. But then the Connection of any Idea, with the Name by which it is expressed, being as we have said wholly arbitrary, the considering the Description of that Idea, as the Definition of that peculiar Name, must

must be so too. So that although Definitions considered as Descriptions of our Ideas, are steady and invariable, yet the Application of them to particular Sounds, (which is all that we understand by the Definition of the Name) is wholly a Work of our own free Choice.

VI. BUT secondly, besides considering Words as the Signs of our own Ideas, we are also very apt on many Occasions, to refer them to the Ideas in the Minds of other Men. Now to define a Term in this View, is to investigate its Meaning or Acceptation, according to the common Use of Speech. Here then it is plain that Definitions are not arbitrary. For although in regarding Words as the Marks of our own Ideas, we may give them what Meaning we please; yet when we consider them in reference to the thoughts of others, they have a fixed and steady Signification; namely, that which Custom, and the Propriety of Language, has assigned them. The Words *Ability*, and *Genius*, may by any Man be made to stand for one and the same Idea in his own Mind, and if he takes care to advertise us of this, he is at liberty to use them promiscuously. But if the common Course of Language, hath confined the Word *Genius*, to express the natural Strength and Talents of the Mind, and the Word *Ability* to denote those which are acquired, whoever pretends to explain the proper Acceptation of these Terms, is bound to take notice of this Difference. As Propriety of Speech makes our Language intelligible, and gives our Thoughts a ready Entrance into the Minds of others, it well deserves our Application and Care. The best way to acquire it is from the Writings and Discourses of those, who seem to have had the clearest Notions, and to have applied their Terms with the exactest Choice and Fitness.

Definitions of Words according to the common Use of Language not arbitrary.

VII. WE come now to the third and last Species of Definitions, that namely which considers Words as referred to Things themselves. And here it is plain we are not at liberty to feign and fashion our Explications at pleasure, but being tied down to the real Objects of Nature, must study a Conformity to Things themselves. When we define for instance the *Sun*, considered as that Being, who possesses the Center of our System, and diffuses Heat and Light to the Planets around him; it is not enough that we give an Account of the Idea, answering to that Word in our Minds. We must further take care, that the Idea itself, carries

Definition of the Language refer to the real Objects of Nature.

ries in it a real Conformity to the Object it is supposed to represent. And hence it is, that all Definitions of this Kind, when justly made, are in reality Pictures or Representations, taken from the Being and Existence of Things. For they are intended to express their Nature and Properties, so as to distinguish them from all others, and exhibit them clearly to the View of the Mind. 'Tis for this Reason that Logicians call them *Definitions of the Thing*, because they are supposed to refer not so much to the Ideas in the Understanding, as to the Things themselves represented by those Ideas.

*Ground of the
Distinction
between the
Definition of
the Name and
of the Thing.*

VIII. AND this also lets us into the Ground of that Distinction so universally received, between Definitions of the Name and of the Thing. The first are arbitrary, and not liable to Debate or Contradiction. The second are Propositions capable of Proof and Illustration, and which may therefore be contested. The Reason is obvious. Definitions of the Name serve only to mark, what Ideas we connect with our Words. And as Sounds are of themselves indifferent to signify any Ideas, we are entirely at liberty to affix to them what Notions we please. But it is otherwise in the Definition of the Thing. For here our Words serving to denote certain particular Beings in Nature, cannot be the Signs of any Ideas at pleasure, but of such only as carry in them a Conformity to the several Objects to which the Words refer. A Man may use the Term *Square* to express that Idea, which others denote by the Word *Triangle*, and define it accordingly. In this Case indeed he recedes from the common Forms of Speech, but his Definition cannot be charged with Falshood. He tell us that by a *Square* he means a three-sided Figure, and who can dispute the Truth of this, if he really all along uses the Word in that Sense? I would only observe, that by changing thus the Meaning of Words, we change not Things themselves, or their Relations and Habitudes one towards another. These are at all times the same and invariable, nor have any Dependence upon the Fancy and Caprice of Men. It is true the Properties of the *Triangle* may after this Definition, be affirmed of the *Square*; but as in either Case, the Ideas to which these Properties belong, is the same, the Propositions only expressing our Judgments, and not our Judgments themselves, suffer a seeming Variation.

IX. BUT where Words are made to denote particular Objects, previous to any Definitions given, there arbitrary Explications cannot have place. For in this Case, we are not put upon explaining what Ideas we connect with our Words, but a Connection being already supposed, between the Name and the Thing signified, our Business is, to unfold that Idea, by which the Object itself is most clearly and distinctly represented. Thus the Word *Gold* denotes that Metal, which is of highest Value among Men, and goes farthest in the way of Commerce. This Connection being once settled, we are no longer left to arbitrary Definitions, but must describe it by such Properties as are really to be found in it, and will best serve to distinguish it when it comes in our way; as by saying that it is *a Substance yellow, very heavy, malleable, fusible, &c.*

A previous Connection between Names and Things, cuts off all arbitrary Explications.

X. FROM what has been said it appears, that in the Language of Logicians, Definitions of the Thing respect only Substances, and Beings that have a real Existence in Nature, serving to describe them by their Properties and Attributes. And this I doubt not is the Reason, that the Definitions of the Mathematicians, are not considered as Definitions of the Thing, but of the Name; because the Ideas therein described, are mere Creatures of the Understanding, and not supposed to be copied from Patterns existing without. A Circle, a Triangle, a Square, &c. such as Mathematicians conceive them, are no where to be found in Nature, that we know of. Hence it might justly be accounted absurd, to call our Definitions of these *Definitions of the Thing*, when they serve not to describe any real Objects of Nature, but merely to unfold the Conceptions of the Mind. And yet if we look into the Matter narrowly, we shall find, that the Rules followed in these Definitions, are precisely the same, with those which Logicians have laid down for the Definition of the Thing. All the several Species of Figures are described by their Properties, some of which are common to different Ranks, others peculiar to the Tribe defined. The common Properties constitute what Logicians call the *Genus*, and those that are peculiar the *Difference*. Now the *Genus* and *Difference* make up the Logical Definition of the Thing, as will be more clearly understood from what follows.

Why Mathematical Definitions have been accounted mere Definitions of the Name.

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XI. I AM therefore apt to think, that Mathematical Definitions, as they are of the same general Form with the Definitions of Substances, and subject to the same Rules, have been improperly considered as mere Definitions of the Name, in which we are left wholly to arbitrary Explications, For however we may change the Name of one Figure for another in Discourse or Writing, using the Term *Square* to denote a *Triangle*, or the Word *Triangle* to express a *Square*, it is certain the Ideas themselves are invariable, and no less capable of being distinguished by their Properties, than the several Species of Substances. Thus if we suppose the Word *Square*, to denote that Species of Figures, whose Sides severally subtend Quadrants of a circumscribed Circle, we shall find ourselves equally shut out from arbitrary Explications, as in the Definition of the Names of Substances. For as this happens in no Figures but those which are bounded by four equal Sides, joined together at right Angles; it follows evidently, that the true and proper Definition of a *Square*, is that which exhibits the precise Idea here mentioned, and no other, to the Mind. And thus it appears, that the common Division of Definitions, into those of the Name and Thing, is not sufficiently calculated to give us right Apprehensions, as to what is and what is not arbitrary in the Explication of Words. It may not therefore be improper, if we here endeavour to clear up this Matter a little, and free it from those Obscurities in which it has hitherto been involved. To this end we shall premise the following Observations.

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XII. I. FIRST, that whatever Logicians may pretend about the Definition of the Thing, it is yet certain, that none of our Definitions when pursued to their Source, regard immediately Things themselves, but merely the Ideas in our own Minds. This I doubt not will appear a Paradox to many, who will be apt to enquire, whether the Definition of *Gold*, be not taken from that Metal, independent of the various Conceptions of Men about it. To this I answer, that indeed in framing our Idea of *Gold*, we regard chiefly the Thing itself, uniting in our Conception such Properties as are most conspicuous, and serve best to distinguish it from other Metals, to which it may bear any Resemblance. But as it is by this Idea alone that Gold is known to us, so in describing it to others, we aim at nothing more than to transfer

infer the same Conception into their Minds. Now this is no otherwise be done, but by enumerating the several properties out of which our own complex Notion is formed. And indeed it were in the highest Degree absurd to imagine, that Men in explaining Things to others, should make use of any Marks or Characters, but those by which they are known to themselves. Hence it comes to pass, that all our Definitions, are in Fact nothing else but Transcripts of the Ideas in our Minds. Where these are imperfect, the Definition must be so too; where they are just and adequate, the Copies taken from them, if drawn out with Accuracy and Care, cannot fail to exhibit the Object described. And this will very well serve to account, for that great Diversity of Definitions we often meet with, even of one and the same Object. Because Men, in consequence of their different Pursuits and Applications, falling often into different Views of Things, must needs vary no less in their Definitions, than in the Ideas themselves from which these Definitions are copied. He whose Observation goes no farther than the more obvious Qualities of Gold, will content himself with describing it by its Colour, Weight, and perhaps Malleability and Fusibility. On the other hand a Goldsmith, having enquired farther into the Nature of that Metal, and finding several other Properties that equally belong to it, will be apt to take these also into his complex Idea, and accordingly introduce them into a Definition. Hence his Description will add to the former, Fixedness, and Solubility in *Aqua Regia*, &c. And so in Proportion, as Men's various Pursuits lead them into a more accurate Examination of things, their Explications will take a different Turn, suitable to the Ideas they have framed within themselves.

XIII. 2. THIS then being evident, that our Definitions respect not Things themselves, but the Ideas in our own Minds; I would in the next place observe, that the Distinction of them into Use of the Name and Thing, is altogether useless, and tends rather to mislead us, than give right Apprehensions of the Subject in Hand.

Distinction between the Definition of the Name and Thing, useless and to be rejected.

For thus Men are apt to fancy, that many of their Definitions are expressive of the real Essence of Things, whereas they are in Truth no more than Transcripts of their own Ideas. And as it sometimes falls out, that these Ideas are not collected with sufficient Care, from the Objects they represent; we find by Experience, that a mistaken Idea, never fails to occasion a Mistake also in the Definition. But this could not

66 Of SIMPLE APPREHENSION, BOOK I.

happen, were our Definitions copied from Things themselves : because their Essences being immutable and always the same, the Definition would in this Case serve to correct the Idea, and might be considered as a Standard, by which to judge, whether the Idea was rightly framed. I deny not that Words are often transferred from our Ideas, to signify the Objects which these Ideas represent ; as when we talk of the Sun, the Earth, Men, and other Animals. But then let it be observed, that as these Objects are only known to us, by the Ideas of them in our Minds ; so in describing them to others, all we aim at is, distinctly to lay open our Conceptions about them. Hence it appears, that what Logicians call a *Definition of the Thing*, is in truth no more, than an unfolding of the Idea, by which that Thing is represented to the Understanding. But now in Mathematical Definitions, and indeed all others whatsoever, this also is our whole Aim and Intent, to exhibit and lay open those Ideas, of which the Words we use are the Signs. And thus it happens, that in innumerable Instances, which Logicians call the *Definition of the Name*, is yet found to coincide with, and proceed by the very same Rules, as the *Definition of the Thing* ; which clearly demonstrates the Necessity of banishing this frivolous Distinction, and establishing some precise and determinate Notion, expressive of the true Nature of a Definition, and comprehending it in its full Extent.

*Definitions in
all Cases De-
scriptions of
our Ideas.*

XIV. NOR will this appear so difficult a Task if we call to mind, that Words are in all Cases the Signs of our Ideas, and no otherwise signify things, than as they stand for those Ideas by which things are represented to the Understanding. By defining our Words therefore we can mean no more, than the laying open to the View of others the Ideas of which these Words are Signs. For thus it is that the Meaning of our Expressions comes to be known, and that we find ourselves capable of transferring our Thoughts and Conceptions into the Minds of those with whom we converse. Where Words are referred to Things themselves, there we explain the Ideas by which these things are represented ; where they denote Conceptions framed by the Mind, there we lay open these Conceptions, and endeavour to exhibit them according to their real Appearance within our own Breasts. But in both Cases it is our own Ideas, it is the Perceptions of **our own** Minds, either as taken from Things without, or framed by the Understanding itself, that we explicate and unfold.

XV. AND thus we have at length settled the true and genuine Notion of a Definition, comprehending all its Varieties, from whatever Science taken, or to whatever Objects extended. For from what we have said it evidently follows, that a Definition is the unfolding of some Conception of the Mind, answering to the Word or Term made Use of as the Sign of it. Now as in exhibiting any Idea to another, it is necessary that the Description be such, as may excite that precise Idea in his Mind; hence it is plain, that Definitions properly speaking are not arbitrary, but confined to the representing of certain determinate settled Notions, such namely as are annexed by the Speaker or Writer to the Words he uses. As nevertheless it is universally allowed, that the Signification of Words is perfectly voluntary, and not the Effect of any natural and necessary Connection, between them and the Ideas for which they stand, some may perhaps wonder why Definitions are not so too. In order therefore to unravel this Difficulty, and show distinctly what is, and what is not arbitrary in Speech, we must carefully distinguish between the Connection of our Words and Ideas, and the unfolding of the Ideas themselves.

Not arbitrary, as being confined to the Representation of certain determinate Notions.

XVI. FIRST, as to the Connection of our Words and Ideas, this it is plain is a purely arbitrary Institution. When for instance we have in our Minds, the Idea of any particular Species of Metals, the calling it by the Name *Gold*, is an Effect of the voluntary Choice of Men speaking the same Language, and not of any peculiar Aptness in that Sound to express that Idea. Other Nations we find make Use of different Sounds, and with the same Effect. Thus *Aurum* denotes that Idea in *Latin*, and *Or* in *French*. And even the Word *Gold* itself, would have as well served to express the Idea of that Metal which we call *Silver*, had Custom in the Beginning established it.

The Connection between Words and Ideas, a perfectly voluntary Establishment.

XVII. BUT although we are thus entirely at Liberty, in connecting any Idea with any Sound, yet it is quite otherwise in unfolding the Ideas themselves. For every Idea, having a precise Appearance of its own, by which it is distinguished from every other Idea; it is manifest, that in laying it open to others, we must study such a Description, as shall exhibit that peculiar Appearance. When we have formed to ourselves the Idea of a Figure, bounded by four equal

The Descriptions of Ideas not so, but bounded to the Representation of that precise Appearance by which they are distinguished among themselves.

68 *Of* SIMPLE APPREHENSION. BOOK I.

Sides, joined together at right Angles, we are at Liberty to express that Idea by any Sound, and may call it either a *Square* or a *Triangle*. But whichever of these Names we use, so long as the Idea is the same, the Description by which we would signify it to another, must be so too. Let it be called *Square* or *Triangle*, it is still a Figure having four equal Sides, and all its Angles right ones. Hence we clearly see, what is and what is not arbitrary in the Use of Words. The establishing any Sound, as the Mark of some determinate Idea in the Mind, is the Effect of free Choice, and a voluntary Combination among Men. And as different Nations make use of different Sounds, to denote the same Ideas, hence proceeds all that Variety of Languages, which we meet with in the World. But when a Connection between our Ideas and Words is once settled, the unfolding of the Idea answering to any Word, which properly constitutes a Definition, is by no Means an arbitrary thing. For here, as I have already observed, we are bound to exhibit that precise Conception, which either the Use of Language, or our own particular Choice, hath annexed to the Term we use.

*Cause of the
Obscurity that
has hitherto
perplexed the
Theory of De-
finitions.*

XVIII. AND thus it appears, that Definitions considered as Descriptions of Ideas in the Mind, are steady and invariable, being bounded to the Representation of these precise Ideas. But then in the Application of Definitions to particular Names, we are altogether left to our own free Choice. Because as the Connecting of any Idea, with any Sound, is a perfectly arbitrary Institution; the applying the Description of that Idea, to that Sound, must be so too. When therefore Logicians tell us, that the Definition of the Name is arbitrary, they mean no more than this; that as different Ideas may be connected with any Term, according to the good Pleasure of him that uses it, in like manner may different Descriptions be applied to the Term, suitable to the Ideas so connected. But this Connection being settled, and the Term considered as the Sign of some fixed Idea in the Understanding, we are no longer left to arbitrary Explications, but must study such a Description, as corresponds with that precise Idea. Now this alone, according to what has been before laid down, ought to be accounted a Definition. What I am apt to think has occasioned no small Confusion in this Matter, is; that many Explanations of Words, where no Idea is unfolded, but merely the Connection between some Word and Idea asserted, have yet been dignified with the Name of Definitions. Thus in
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the Instance before given, when we say that *a Clock is an Instrument by which we measure Time*: that is by some called a Definition. And yet it is plain, that we are beforehand supposed to have an Idea of this Instrument, and only taught that the Word *Clock*, serves in common Language to denote that Idea. By this Rule, all Explications of Words in our Dictionaries will be Definitions, nay as was already observed, the Names of even simple Ideas may be thus defined. *White* we may say is the Colour we observe in Snow or Milk, *Heat* the Sensation produced by approaching the Fire, and so in innumerable other Instances. But these, and all others of the like kind, are by no means Definitions, exciting new Ideas in the Understanding, but merely Contrivances to remind us of known Ideas, and teach their Connection with the established Names. It is nevertheless worth our Notice, that what Logicians call Definitions of the Name, extend properly no farther than these Explanations, serving to mark the Connection of our Ideas and Words; and are therefore justly accounted arbitrary, inasmuch as the Connections themselves are altogether so.

XIX. BUT now in Definitions properly so called, we first consider the Term we use, as the Sign of some inward Conception, either annexed to it by Custom, or our own free Choice; and then the Business of the Definition is, to unfold and explicate that Idea. As therefore the whole Art lies, in giving just and true Copies of our Ideas; a Definition is then said to be perfect, when it serves distinctly to excite the Idea described, in the Mind of another, even supposing him before wholly unacquainted with it. This Point settled, let us next enquire, what those Ideas are, which are capable of being thus unfolded? And in the first place it is evident, that all our simple Ideas are necessarily excluded. We have seen already, that Experience alone is to be consulted here, inasmuch that if either the Objects whence they are derived come not in our Way, or the Avenues appointed by Nature for their Reception are wanting, no Description is sufficient to convey them into the Mind. But where the Understanding is already supplied with these original and primitive Conceptions, as they may be united together in an Infinity of different Forms; so may all their several Combinations be distinctly laid open, by enumerating the simple Ideas concerned in the various Collections, and tracing the Order and Manner in which they are linked one to another. Now these Combinations of

Complex Ideas alone capable of that Kind of Description which goes by the Name of a Definition.

simple Notices constitute what we call our complex Notions ; whence it is evident, that complex Ideas, and those alone, admit of that kind of Description, which goes by the Name of a Definition.

When a complex Idea may be said to be fully unfolded.

XX. THE Business of Definitions is now I think pretty plain. They are as we have seen, Pictures or Representations of our Ideas ; and as these Representations are then only possible, when the Ideas themselves are complex ; it is obvious to remark, that Definitions cannot have place, but where we make use of Terms, standing for such complex Ideas. But perhaps the Reader may still expect, that we should enter a little more particularly into the Nature of a Definition, describe its Parts, and shew by what Rules it ought to proceed, in order to the Attainment of its proper End. To give therefore what Satisfaction we are able upon this Point, we must again call to mind, that the Design of a Definition is, so to unfold the Idea answering to any Term, as that it may be clearly and distinctly transferred into the Mind of another. But now our complex Ideas, which alone are capable of this kind of Description, being as we have said nothing more, than different Combinations of simple Ideas ; we then know and comprehend them perfectly, when we know the several simple Ideas of which they consist, and can so put them together in our Minds, as is necessary towards the framing of that peculiar Connection, which gives every Idea its distinct and proper Appearance.

Two Things required in a Definition : to enumerate the Ideas, and explain the Manner of their Combination.

XXI. Two Things are therefore required in every Definition. First, that all the original Ideas out of which the complex one is formed, be distinctly enumerated. Secondly, that the Order and Manner, of combining them into one Conception, be clearly explained. Where a Definition has these Requisites, nothing is wanting to its Perfection ; because every one who reads it, and understands the Terms, seeing at once what Ideas he is to join together, and also in what Manner ; can at pleasure form in his own Mind, the complex Conception answering to the Term defined. Let us for Instance suppose the Word *Square*, to stand for that Idea, by which we represent to ourselves a Figure, whose Sides subtend Quadrants of a circumscribed Circle. The Parts of this Idea, are the Sides bounding the Figure. These must be four in Number, and all equal among themselves, because they are each to subtend a fourth Part of the same Circle. But besides these component Parts, we must also take

take notice of the Manner of putting them together, if we would exhibit the precise Idea, for which the Word *Square* here stands. For four equal right Lines, any how joined, will not subtend Quadrants of a circumscribed Circle. A Figure with this Property, must have its Sides standing also at right Angles. Taking in therefore this last Consideration, respecting the Manner of combining the Parts, the Idea is fully described, and the Definition thereby rendered compleat. For a Figure bounded by four equal Sides, joined together at right Angles, has the Property required; and is moreover the only right-lined Figure, to which that Property belongs.

XXII. AND now I imagine it will be obvious to every one, in what Manner we ought to proceed, in order to arrive at just and adequate Definitions. First, we are to take an exact View of the Idea to be described, trace it to its original Principles, and mark the several simple Perceptions, that enter into the Composition of it. Secondly, we are to consider the particular Manner, in which these elementary Ideas are combined, in order to the forming of that precise Conception, for which the Term we make use of stands. When this is done, and the Idea wholly unravelled, we have nothing more to do, than fairly transcribe the Appearance it makes to our own Minds. Such a Description, by distinctly exhibiting the Order and Number of our primitive Conceptions, cannot fail to excite at the same time, in the Mind of every one that reads it, the complex Idea resulting from them; and therefore attains the true and proper End of a Definition.

How we are to proceed to arrive at just and adequate Definitions.

C H A P. VII.

Of the Composition and Resolutions of our Ideas, and the Rules of Definition thence arising.

I. THE Rule laid down in the foregoing Chapter is general, extending to all possible Cases; and is indeed that to which alone we can have recourse, where any Doubt or Difficulty arises. It is not however necessary, that we should practise it in every particular Instance. Many of our Ideas are extremely complicated, insomuch that to enumerate all the simple Perceptions, out of which they are form-

In comprehending our Ideas, we proceed by a successive Gradation.

ed, would be a very troublesome and tedious Work. For this Reason, Logicians have established certain compendious Rules of defining, of which it may not be amiss here to give some Account. But in order to the better understanding of what follows, it will be necessary to observe, that there is a certain Gradation in the Composition of our Ideas. The Mind of Man is very limited in its Views, and cannot take in a great Number of Objects at once. We are therefore fain to proceed by Steps, and make our first Advances subservient to those which follow. Thus in forming our complex Notions, we begin at first with but a few simple Ideas, such as we can manage with Ease, and unite them together into one Conception. When we are provided with a sufficient Stock of these, and have by Habit and Use rendered them familiar to our Minds, they become the component Parts of other Ideas still more complicated, and form what we may call a second Order of compound Notions. This Process, as is evident, may be continued to any Degree of Composition we please, mounting from one Stage to another, and enlarging the Number of Combinations.

Here the Idea of this Order is comprised, when we advance gradually through all the several Orders.

II. BUT now in a Series of this kind, whoever would acquaint himself perfectly, with the last and highest Order of Ideas, finds it much the most expedient Method, to proceed gradually through all the intermediate Steps. For was he to take any very compound Idea to pieces, and without regard to the several Classes of simple Perceptions, that have already been formed into distinct Combinations, break it at once into its original Principles, the Number would be so great, as perfectly to confound the Imagination, and overcome the utmost Reach and Capacity of the Mind. When we see a prodigious Multitude of Men, jumbled together in Crowds, without Order, or any regular Position, we find it impossible to arrive at an exact Knowledge of their Number. But if they are formed into separate Battalions, and so stationed, as to fall within the leisure Survey of the Eye; by viewing them successively and in order, we come to an easy and certain Determination. It is the same in our complex Ideas. When the original Perceptions, out of which they are framed, are very numerous; it is not enough that we take a View of them in loose and scattered Bodies. We must form them into distinct Classes, and unite these Classes in a just and orderly Manner, before we can arrive at a true Knowledge of the compound Notices resulting from them.

III. THIS

III. **THIS** gradual Progress of the Mind to its compound Notions, thro' a Variety of intermediate Steps, plainly points out the manner of conducting the Definitions, by which these Notions are conveyed into the Minds of others.

Our Definitions ought to keep pace with our Ideas, and observe a like Gradation.

For as the Series begins with simple and easy Combinations, and advances through a Succession of different Orders, rising one above another in the Degree of Composition; it is evident that in a Train of Definitions expressing these Ideas, a like Gradation is to be observed. Thus the complex Ideas of the lowest Order, can no otherwise be described, than by enumerating the simple Ideas out of which they are made, and explaining the manner of their Union. But then in the second, or any succeeding Order; as they are formed out of those gradual Combinations, that constitute the inferior Classes, it is not necessary in describing them, to mention one by one, all the simple Ideas of which they consist. They may be more distinctly and briefly unfolded, by enumerating the compound Ideas of a lower Order, from whose Union they result, and which are all supposed to be already known, in consequence of previous Definitions. Here then it is, that the Logical Method of defining takes place; which that we may the better understand, I shall explain somewhat more particularly, the several Steps and Gradations of the Mind, in compounding its Ideas, and thence deduce that peculiar Form of a Definition, which Logicians have thought fit to establish.

IV. **ALL** the Ideas we receive, from the several Objects of Nature that surround us, represent distinct Individuals. These Individuals when compared together, are found in certain Particulars to resemble. Hence by collecting the resembling Particulars into one Conception, we form the Notion of a *Species*. And here let it be observed, that this last Idea is less complicated, than that by which we represent any of the particular Objects contained under it. For the Idea of the Species excludes the Peculiarities of the several Individuals, and retains only such Properties as are common to them all. Again, by comparing several Species together, and observing their Resemblance, we form the Idea of a *Genus*; where in the same manner as before, the Composition is lessened, because we leave out what is peculiar to the several Species compared, and retain only the Particulars wherein they agree. It is easy to conceive the Mind, proceeding thus from one Step to another, and advancing

The Steps by which the Mind proceeds from particular to general Ideas.

through its several Classes of general Notions, until at last it comes to the highest Genus of all, denoted by the Word *Being*, where the bare Idea of Existence is only concerned.

*The Conduct
of the Mind in
compounding
its Ideas, as
it advances
thro' the dif-
ferent Orders
of Perception.*

V. IN this Procedure we see the Mind, unraveling a complex Idea, and tracing it in the ascending Scale, from greater to less Degrees of Composition, until it terminates in one simple Perception. If now we take the Series the contrary Way, and beginning with the last or highest Genus, carry our View downwards, thro' all the inferior Genera and Species, quite to the Individuals, we shall thereby arrive at a distinct Apprehension, of the Conduct of the Understanding in compounding its Ideas. For in the several Classes of our Perceptions, the highest in the Scale, is for the most part made up, of but a few simple Ideas, such as the Mind can take in and survey with Ease. This first general Notion, when branched out into the different Subdivisions contained under it, has in every one of them something peculiar, by which they are distinguished among themselves; insomuch that in descending from the Genus to the Species, we always superadd some new Idea, and thereby increase the Degree of Composition. Thus the Idea denoted by the Word *Figure*, is of a very general Nature, and composed of but few simple Perceptions, as implying no more than Space every where bounded. But if we descend farther, and consider the Boundaries of this Space, as that they may be either Lines or Surfaces, we fall into the several Species of Figure. For where the Space is bounded by one or more Surfaces, we give it the Name of a *solid Figure*; but where the Boundaries are Lines, it is called a *plain Figure*.

*The Idea of
the Species
framed by su-
peradding the
specifick Dif-
ference to the
Genus.*

VI. IN this View of things it is evident, that the *Species* is formed by superadding a new Idea to the *Genus*. Here for instance the Genus is circumscribed Space. If now to this we superadd the Idea of a Circumscription by Lines, we frame the Notion of that Species of Figures which are called *plain*; but if we conceive the Circumscription to be by Surfaces, we have the Species of *solid Figures*. This superadded Idea is called the *specifick Difference*, not only as it serves to divide the *Species* from the *Genus*, but because being different in all the several Subdivisions, we thereby also distinguish the *Species* one from another. And as it is likewise that Conception, which by being joined to the general Idea, compleats the Notion of the *Species*; hence it

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is plain, that the *Genus* and *specifick Difference*, are to be considered as the proper and constituent Parts of the *Species*. If we trace the Progress of the Mind still farther, and observe it advancing thro' the inferior *Species*, we shall find its manner of proceeding to be always the same. For every lower *Species*, is formed by superadding some new Idea, to the *Species* next above it; insomuch that in this descending Scale of our Perceptions, the Understanding passes thro' different Orders of complex Notions, which become more and more complicated at every Step it takes. Let us resume here for instance, the *Species* of plain Figures. They imply no more than Space bounded by Lines. But if we take in an additional Consideration of the Nature of these Lines, as whether they are *Right* or *Curves*, we fall into the Subdivisions of plain Figure, distinguished by the Names of *Rectilinear*, *Curvilinear*, and *Mixtilinear*.

VII. AND here we are to observe, that tho' plain Figures, when considered as one of those Branches that come under the Notion of Figure in general, take the Name of a *Species*; yet compared with the Classes of *Curvilinear*, *Rectilinear*, and *Mixtilinear*, into which they themselves may be divided, they really become a *Genus*, of which the before-mentioned Subdivisions constitute the several *Species*. These *Species*, in the same manner as in the Case of plain and solid Figures, consist of the *Genus* and *specifick Difference* as their constituent Parts. For in the *Curvilinear* Kind, the *Curvity* of the Lines bounding the Figure, makes what is called the *specifick Difference*; to which if we join the *Genus*, which here is plain Figure, or Space circumscribed by Lines, we have all that is necessary towards completing the Notion of this *Species*. We are only to take Notice, that this last Subdivision, having two *Genera* above it, viz. *plain Figure*, and *Figure in general*; the *Genus* joined with the *specifick Difference*, in order to constitute the *Species* of *Curvilinear*, is that which lies nearest to the said *Species*. It is the Notion of *plain Figure*, and not of *Figure in general*, that joined with the Idea of *Curvity*, makes up the complex Conception of *Curve-lined Figures*. For in this descending Scale of our Ideas, *Figure in general*, *plain Figures*, *Curve-lined Figures*, the two first are considered as *Genera* in respect of the third; and the second in order, or that which stands next to the third, is called the *nearest Genus*. But now as it is this second Idea, which joined with the Notion of *Curvity*, forms the *Species* of *Curve-lined Figures*; it is plain, that the

And in all the inferior Species, by superadding the specifick Difference to the nearest Genus.

third

third or last Idea in the Series, is made up of the *nearest Genus* and *specifick Difference*. This Rule holds invariably, however far the Series is continued; because in a Train of Ideas thus succeeding one another, all that precede the last, are considered as so many Genera in respect of that last, and the last itself is always formed, by superadding the specifick Difference to the Genus next it.

The Idea of an Individual composed of the Genus, & Specifick Difference.

VIII. HERE then we have an universal Description, applicable to all our Ideas of whatever kind, from the highest Genus to the lowest Species. For taking them in order downwards from the said general Idea, they every where consist of the *Genus proximum*, and *Differentia specifica*, as Logicians love to express themselves. But when we come to the lowest Species of all, comprehending under it only Individuals, the superadded Idea, by which these Individuals are distinguished one from another, no longer takes the Name of the specifick Difference. For here it serves not to denote distinct Species, but merely a Variety of Individuals, each of which having a particular Existence of its own, is therefore *numerically* different from every other of the same Kind. And hence it is, that in this last Case, Logicians chuse to call the superadded Idea, by the Name of the *numerical Difference*; inasmuch that as the Idea of a Species, is made up of the *nearest Genus* and *specifick Difference*, so the Idea of an Individual, consists of the *lowest Species* and *numerical Difference*. Thus the Circle is a Species of Curve-lined Figures, and what we call the *lowest Species*, as comprehending under it only Individuals. Circles in particular are distinguished from one another by the Length and Position of their Diameters. The Length therefore and Position of the Diameter of a Circle, is what Logicians call the *numerical Difference*; because these being given, the Circle itself may be described, and an Individual thereby constituted.

Definitions to follow one another in Train, and pass thro' the same successive Gradations as our compound Ideas.

IX. AND thus we have endeavoured to trace, in the best manner we are able, the Progress of the Mind in compounding its Ideas. It begins we see with the most general Notions, which consisting of but a few simple Notices, are easily combined and brought together into one Conception. Thence it proceeds to the Species comprehended under this general Idea, and these are formed by joining together the *Genus* and *specifick Difference*. And as it often happens, that these Species may be still farther subdivided, and run on in a long Series of continued

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Gradations, producing various Orders of compound Perceptions; so all these several Orders, are regularly and successively formed, by annexing in every Step, the *specifick Difference* to the *nearest Genus*. When by this Method of Procedure, we are come to the lowest Order of all; by joining the *Species* and *numerick Difference*, we frame the Ideas of Individuals. And here the Series necessarily terminates, because it is impossible any farther to bound or limit our Conceptions. This View of the Composition of our Ideas, representing their constituent Parts in every Step of the Progression, naturally points out the true and genuine Form of a Definition. For as Definitions are no more, than Descriptions of the Ideas, for which the Terms defined stand; and as Ideas are then described, when we enumerate distinctly and in Order, the Parts of which they consist; it is plain that by making our Definitions follow one another, according to the natural Train of our Conceptions, they will be subject to the same Rules, and keep pace with the Ideas they describe.

X. As therefore the first Order of our compound Notions, or the Ideas that constitute the highest Genera, in the different Scales of Perception, are formed, by uniting together a certain Number of simple Notices; so the Terms expressing these Genera, are defined, *by enumerating the simple Notices so combined*. And as the Species comprehended under any Genus, or the complex Ideas of the second Order, arise from superadding the *specifick Difference*, to the said general Idea; so the Definition of the Names of the Species, is absolved, *in a Detail of the Ideas of the specifick Difference, connected with the Term of the Genus*. For the Genus having been before defined, the Term by which it is expressed, stands for a known Idea, and may therefore be introduced into all subsequent Definitions, in the same manner as the Names of simple Perceptions. It will now I think be sufficiently obvious, that the Definitions of all the succeeding Orders of compound Notions, will every where consist, *of the Term of the nearest Genus, joined with an Enumeration of the Ideas that constitute the specifick Difference*; and that the Definition of Individuals, *unites the Names of the lowest Species, with the Terms by which we express the Ideas of the numerick Difference*.

The Form of a Definition in all the various Orders of Conception.

XI. HERE then we have the true and proper Form of a Definition, in all the various Orders of Conception. This is that Method of Defining, which is commonly called *Logical*, and which we see is perfect in its kind, inasmuch as it presents a full and adequate

The Logical Method of defining perfect in its Kind.

78 *Of SIMPLE APPREHENSION, &c.* Book I.

adequate Description of the Idea, for which the Term defined stands. There are still two Things worthy of Observation, before we take leave of this Subject. First, that the very Frame and Contexture of these Definitions, points out the Order in which they ought to follow one another. For as the Name of the Genus is admitted into a Description, only in consequence of its having been before defined; it is evident, that we must pass gradually, through all the different Orders of Conception. Accordingly, Logicians lay it down as a Rule, that we are to begin always with the highest Genus, and carry on the Series of Definitions regularly, through all the intermediate Genera and Species, quite down to the Individuals. By this means our Descriptions keep pace with our Ideas, and pass through the same successive Gradations; inso-much that the Perusal of them, must excite those Ideas in the Understanding of another, in the very Order and Manner, in which they are put together by the Mind, in its uniform Advances from simple to the most complicated Notions. Now this is the true and proper End of Defining, and indeed the highest Perfection of that Art.

*And applica-
ble to all
Words what-
soever, capable
of a Defini-
tion.*

XII. THERE is yet another Thing to be observed on this Head, namely; that the Form here prescribed, is applicable to all Words whatsoever, capable of a Definition. For as every Term we use, must denote some Idea, either general or particular; and as all our complex Notions, relating to both these Classes of Perception, from the highest Genus, quite down to the Individuals, come within the Rules of Description here given; it is evident, that this particular Manner of unfolding an Idea, may be extended to all the possible complex Conceptions, we can connect with our Words. By the Rules therefore of this Method, Definitions may be applied, to all Terms standing for complex Ideas; and as these, by what we have shewn at large in the two foregoing Chapters, are the only definable Articles of Speech; it necessarily follows, that the Directions here given are universal, extend to all particular Instances, and are alike applicable in all Languages. And thus at length, we have not only deduced, that peculiar Form of a Definition which obtains among Logicians, but shewn it also to be perfect in its kind, and to take in the whole Compass of Language.

THE
ELEMENTS
OF
LOGICK.

BOOK II.
Of JUDGMENT, or INTUITION.

CHAP. I.

Of the Grounds of human Judgment.

I. **W**HEN the Mind is furnished with Ideas, its next Step in the Way to Knowledge is, the comparing these Ideas together, in order to judge of their Agreement or Disagreement. In this joint View of our Ideas, if the Relation is such, as to be immediately discoverable by the bare Inspection of the Mind; the Judgments thence obtained are called *intuitive*; from a Word that denotes *to look at*: for in this Case, a mere Attention to the Ideas compared, suffices to let us see, how far they are connected or disjoined. Thus, *that the Whole is greater than any of its Parts*, is an intuitive Judgment, nothing more being required to convince us of its Truth, than an Attention to the Ideas of *Whole* and *Part*. And this too is the Reason, why

Intuition respects the Relations between our Ideas when they are immediately perceived.

why we call the Act of the Mind forming these Judgments, *Intuition*; as it is indeed no more, than an immediate Perception of the Agreement or Disagreement of any two Ideas.

Ix. Intuition is the Ground of all our Judgments. II. BUT here it is to be observed, that our Knowledge of this kind, respects only our Ideas, and the Relations between them; and therefore can serve only as a Foundation to such Reasonings, as are employed in investigating these Relations.

Now it so happens, that many of our Judgments are conversant about Facts, and the real Existence of Things, which cannot be traced by the bare Contemplation of our Ideas. It does not follow, because I have the Idea of a Circle in my Mind, that therefore a Figure answering to that Idea, has a real Existence in Nature. I can form to myself the Notion of a Centaur, or golden Mountain, but never imagine on that account, that either of them exist. What then are the Grounds of our Judgment in relation to Facts? I answer, these two, *Experience* and *Reason*. By *Experience* we are informed of the Existence of external Objects which surround us, and operate on our Senses. *Reason* is of a wider Extent, and reaches not only to Objects beyond the present Sphere of our Observation, but also to Facts and Transactions, which being now past, and having no longer any Existence, could not without this Conveyance, have fallen under our Cognizance.

Three Foundations of human Judgment. III. HERE then we have three Foundations of our Knowledge, from which the whole System may with Ease and Advantage be derived. First *Intuition*, which respects our Ideas themselves, and their Relations, and is the Foundation of that Species of Reasoning, which we call *Demonstration*. For whatever is deduced from our intuitive Preceptions, by a clear and connected Series of Proofs, is said to be demonstrated, and produces absolute Certainty in the Mind. Hence the Knowledge obtained in this manner, is what we properly term *Science*; because in every Step of the Procedure, it carries its own Evidence along with it, and leaves no room for Doubt or Hesitation. And what is highly worthy of Notice; as the Truths of this Class express the Relations between our Ideas, and the same Relations must ever and invariably subsist between the same Ideas, our Deductions in the Way of Science, constitute what we call eternal, necessary, and immutable Truths. If it be true that the Whole is equal to all its Parts, it must be so unchangeably; because the Relation of Equality being attached to the Ideas themselves,

must

intervene where the same Ideas are compared. Of these are all the Truths of natural Religion, Morality, and Politics, and in general, whatever may be gathered from View and Consideration of our Ideas.

THE second Ground of human Judgment *ence*; from which we infer the Existence of subjects that surround us, and fall under immediate Notice of our Senses. When we see, or cast our Eyes towards a Building, not only have Ideas of these Objects ourselves, but ascribe to them a real Existence in the Mind.

2. *Experience, the Ground of our Knowledge, of the Powers and Qualities of Bodies.*

It is also by the Information of the Mind that we judge of the Qualities of Bodies; as when we say that Snow is white, Fire hot, or Steel hard. For as we are wholly unacquainted with the internal Structure and Motion of the Bodies that produce these Sensations in us, we are unable to trace any Connection between that Cause and the Sensations themselves, it is evident, that our Judgments altogether upon Observation, ascribe to Bodies such Qualities, as are answerable to the Perceptions they excite in us.

But this is not the only Advantage from Experience, for to that too are we indebted, for our Knowledge regarding the Co-existence of sensible Qualities in Objects, and the Operations of Bodies one upon another.

Ivory for Instance is hard and elastic; this we know from Experience, and indeed by that alone. For being altogether ignorant of the true Nature both of Elasticity and Hardness, we cannot by the bare Contemplation of our Ideas determine how far the one necessarily implies the other, or whether there may not be a Repugnance between them.

But when we observe them to exist both in the same Object, we are assured from Experience, that they are not incompatible. And when we also find, that a Stone is hard and not elastic, and that Air though elastic is not hard, we also conclude from the same Foundation, that the Ideas are not necessarily connected, but may exist separately in different Objects. In order with regard to the Operations of Bodies one upon another it is evident, that our Knowledge this Way, is all derived from Observation. *Aqua Regia* dissolves Gold, as we find by frequent Trial, nor is there any other Way known at the Discovery. Naturalists may tell us, if they knew the Parts of *Aqua Regia* are of a Texture apt to enter between the Corpuscles of Gold, and thereby loosen them asunder. If this is a true Account of the Matter, I believe it will notwithstanding be allowed, that

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our Conjecture in regard to the Conformation of these Bodies, is deduced from the Experiment, and not the Experiment from the Conjecture. It was not from any previous Knowledge of the intimate Structure of *Aqua Regia* and *Gold*, and the Aptness of their Parts to act or be acted upon, that we came by the Conclusion abovementioned. The internal Constitution of Bodies is in a manner wholly unknown to us; and could we even surmount this Difficulty, yet as the Separation of the Parts of Gold, implies something like an active Force in the *Menstruum*, and we are unable to conceive how it comes to be possessed of this Activity; the Effect must be owned to be altogether beyond our Comprehension. But when repeated Trials had once confirmed it, inasmuch that it was admitted as an established Truth in natural Knowledge, it was then easy for Men to spin out Theories of their own Invention, and contrive such a Structure of Parts, both for *Gold* and *Aqua Regia*, as would best serve to explain the Phænomenon, upon the Principles of that System of Philosophy they had adopted. I might easily shew from innumerable other Instances, how much our Knowledge, of the mutual Action of Bodies, depends upon Observation. The Bite of a Viper will kill. Plants are some salutary, others noxious. Fire dissolves one Body and hardens another. These are Truths generally known, nor is it less evident, that we owe their Discovery wholly to Experience.

*Why many
useful Inven-
tions owe their
Birth to
Chance.*

V. AND hence it is easy to account for what to some Writers has appeared a very great Paradox; that many of the most important Inventions in human Life, have taken their Rise from Chance, and instead of coming out of the Schools of Philosophers, are for the most part ascribed to Men of no Figure in the Commonwealth of Learning. Sowing, Planting, the Use of the Compass, and such like, are not Deductions of human Reason, but Discoveries which owe their Birth to Observation and Trial. No Wonder therefore, if these Inventions derived their Beginning, from such as being engaged in the active and busy Scenes of Life, were more in the Way of those Experiments, which lead to Discoveries of this Nature. And here, as the particular Callings and Professions of Men, and oft-times Chance, has a great Ascendant, it needs not seem strange, if some of the most useful Arts in Society, appear to have had an Original purely casual.

*Natural
Knowledge
from the*

VI. FROM what has been said it is evident, that as Intuition is the Foundation of what we call *scientific* Knowledge, so is Experience of *natural*.

natural. For this last, being wholly taken up with Objects of Sense, or those Bodies that constitute the natural World: and their Properties, as far as we can discover them, being to be traced only by a long and painful Series of Observations; it is apparent, that in order to improve this Branch of Knowledge, we must betake ourselves to the Method of Trial and Experiment. Accordingly we find, that while this was neglected, little Advance was made in the Philosophy of Nature; whereas a contrary Proceeding, has enriched the present Age, with many valuable Discoveries; insomuch that natural Knowledge, in Allusion to the Foundation on which it stands, has been very aptly called *Experimental Philosophy*.

Ground on which it rests, aptly termed experimental Philosophy.

VII. BUT though Experience, is what we may term the immediate Foundation of natural Knowledge, yet with respect to particular Persons, its Influence is very narrow and confined. The Bodies that surround us are numerous, many of them lie at a great Distance, and some quite beyond our Reach. Life too is short, and so crowded with Cares, that but little Time is left for any single Man, to employ himself in unfolding the Mysteries of Nature. Hence it is necessary, to admit many Things upon the Testimony of others, which by this Means becomes the Foundation of a great Part of our Knowledge of Body. No Man doubts of the Power of *Aqua Regia* to dissolve Gold, though perhaps he never himself made the Experiment. In these therefore and such like Cases, we judge of the Facts and Operations of Nature, upon the mere Ground of Testimony. However, as we can always have recourse to Experience, where any Doubt or Scruple arises, this is justly considered as the true Foundation of natural Philosophy; being indeed the ultimate Support upon which our Assent rests, and whereto we appeal, when the highest Degree of Evidence is required.

Too much of our Knowledge of Body depends on Testimony, yet Experience is the ultimate Foundation of it.

VIII. BUT there are many Facts that will not allow of an Appeal to the Senses, and in this Case Testimony is the true and only Foundation of our Judgments. All human Actions of whatever Kind, when considered as already past, are of the Nature here described; because having now no longer any Existence, both the Facts themselves, and the Circumstances attending them, can be known only from the Relations of such, as had sufficient Opportunities of arriving at the Truth. *Testimony* therefore is justly accounted a third Ground of human Judgment; and as from the other two we have deduced

3. Testimony its Ground of Historical Knowledge.

scientific and *natural* Knowledge, so may we from this derive *historical*; by which I would be understood to mean, not merely a Knowledge of the civil Transactions of States and Kingdoms, but of all Facts whatsoever, where Testimony is the ultimate Foundation of our Belief.

*The second
Operation of
the Mind,
commonly ex-
tended beyond
Intuition.*

IX. BEFORE I conclude this Chapter, it will be necessary to observe; that though the second Operation of the Mind properly speaking, extends not beyond intuitive Perceptions, yet Logicians have not confined themselves to so strict a View of it; but calling it by the Name *Judgment*, thereby denote all the Acts of the Mind, where only two Ideas are compared, without the immediate Interposition of a third. For when the Mind joins or separates two Ideas, though perhaps this is done, in consequence of a Train of previous Reasoning; yet if the Understanding proceeds upon established Notions, without attending to that Train of Reasoning, its Determinations are still considered as Acts of Judgment. Thus, *that God created the Universe*, *that Men are accountable for their Actions*, are frequently mentioned by Logicians, as Instances of the Mind judging. And yet it is apparent that these Judgments are by no means of the Kind we call intuitive; nay that it requires much Exercise of the reasoning Faculty, before a Man can trace their Connection, with the Perceptions of that Name. I could in the same Manner easily shew, that even our Judgments of Experience and Testimony, when pursued to their Source, derive all their Power of Persuasion, from being linked with intuitive Truths. But I shall wave this Enquiry for the present, as being of a Nature too subtile for a Work of this Kind. The Remark itself however was needful, as well to illustrate the proper Distinction between the Powers of the Understanding, as to explain the Reason why in this Part of Logick, we extend the second Operation of the Mind, beyond those Limits that in Strictness of Speech belong to it. Let us now proceed to consider a little more particularly, the Nature and Variety of these our Judgments.

C H A P. II.

Of Affirmative and Negative Propositions.

*The Subject
and Predicate
of a Proposi-
tion explained.*

I. **W**HILE the comparing of our Ideas, is considered merely as an Act of the Mind, assembling them together, and joining or disjoining

disjoining them according to the Result of its Perceptions, we call it *Judgment*; but when our Judgments are put into Words, they then bear the Name of *Propositions*. A Proposition therefore is a Sentence expressing some Judgment of the Mind, whereby two or more Ideas are affirmed to agree or disagree. Now as our Judgments include at least two Ideas, one of which is affirmed or denied of the other, so must a Proposition have Terms answering to these Ideas. The Idea of which we affirm or deny, and of course the Term expressing that Idea, is called the *Subject* of the Proposition. The Idea affirmed or denied, as also the Term answering it, is called the *Predicate*. Thus in the Proposition, *God is omnipotent*: *God* is the Subject, it being of him that we affirm Omnipotence; and *omnipotent* is the Predicate, because we affirm the Idea expressed by that Word to belong to God.

II. BUT as in Propositions, Ideas are either joined or disjoined; it is not enough to have Terms expressing those Ideas, unless we have also some Words to denote their Agreement or Disagreement. That Word in a Proposition, which connects two Ideas together, is called the *Copula*; and if a negative Particle be annexed, we thereby understand that the Ideas are disjoined. The *Substantive Verb*, is commonly made use of for the Copula, as in the above-mentioned Proposition, *God is omnipotent*; where *is* represents the Copula, and signifies the Agreement of the Ideas of *God* and *Omnipotence*. But if we mean to separate two Ideas; then, besides the substantive Verb, we must also use some Particle of Negation, to express this Repugnance. The Proposition, *Man is not perfect*; may serve as an Example of this Kind, where the Notion of *Perfection*, being removed from the Idea of *Man*, the negative Particle *not* is inserted after the Copula, to signify the Disagreement between the Subject and Predicate.

III. EVERY Proposition necessarily consists of these three Parts, but then it is not alike needful that they be all severally expressed in Words; because the Copula is often included in the Term of the Predicate, as when we say, *he sits*; which imports the same as *he is sitting*. In the *Latin* Language, a single Word has often the Force of a whole Sentence. Thus *ambulat* is the same, as *ille est ambulans*; *amo*, as *ego sum amans*, and so innumerable other Instances; by which it appears, that we are not so much to regard the Number of Words in a Sentence, as the Ideas they represent, and the Manner in which they are put together. For wherever two Ideas are

*The Copula,
&c.*

*Propositions
sometimes ex-
pressed by a
single Word.*

joined or disjoined in an Expression, though of but a single Word, it is evident that we have a Subject, Predicate, and Copula, and of consequence a compleat Proposition.

IV. WHEN the Mind joins two Ideas, we call *Affirmative* it an *affirmative* Judgment; when it separates *and negative* them, a *negative*; and as any two Ideas compared *Propositions.* together, must necessarily either agree or not agree, it is evident, that all our Judgments fall under these two Divisions. Hence likewise the Propositions expressing these Judgments, are all either affirmative or negative. An affirmative Proposition connects the Predicate with the Subject, as *a Stone is heavy*; a negative Proposition separates them, as *God is not the Author of Evil*. *Affirmation* therefore is the same as joining two Ideas together, and this is done by means of the Copula. *Negation* on the contrary marks a Repugnance between the Ideas compared, in which Case a negative Particle must be called in, to shew that the Connection included in the Copula does not take place.

V. AND hence we see the Reason of the Rule *When the neg-* commonly laid down by Logicians; that in all *ative Part-* negative Propositions, the Negation ought to af- *icle serves to* fect the Copula. For as the Copula, when placed *disjoin Ideas.* by itself, between the Subject and the Predicate, manifestly binds them together; it is evident, that in order to render a Proposition negative, the Particle of Negation must enter it in such manner, as to destroy this Union. In a word, then only are two Ideas disjoined in a Proposition, when the negative Particle may be so referred to the Copula, as to break the Affirmation included in it, and undo that Connection it would otherwise establish. When we say for instance, *No Man is perfect*; take away the Negation, and the Copula of itself, plainly unites the Ideas in the Proposition. But as this is the very Reverse of what is intended, a negative Mark is added, to shew that this Union does not here take place. The Negation therefore, by destroying the Effect of the Copula, changes the very Nature of the Proposition, inso- much that instead of binding two Ideas together, it denotes their Separation. On the contrary, in this Sentence; *The Man who departs not from an upright Behaviour, is beloved of God*: the Predicate *beloved of God*, is evidently affirmed of the Sub- ject *an upright Man*, so that notwithstanding the negative Par- ticle, the Proposition is still affirmative. The Reason is plain; the Negation here affects not the Copula, but making properly a Part of the Subject, serves with other Terms in the Sen- tence, to form one complex Idea, of which the Predicate *beloved*

beloved of God, is directly affirmed. This perhaps to some may appear a mere Logical Refinement, contrived to justify the Scholastic Rule for distinguishing between affirmative and negative Propositions. But if it be considered, that this Distinction is of great Importance in Reasoning, and cannot in many Cases be made with Certainty, but by means of the Criterion here given, the Reader will see sufficient Reason for my taking so much Pains to illustrate it.

VI. PERHAPS it may still appear a Mystery, how a Copula can be said to be a Part of a negative Proposition, whose proper Business it is to disjoin Ideas. This Difficulty however will vanish, if we call to mind, that every Judgment implies a direct Affirmation, and that this Affirmation alone makes the true Copula in a Proposition. But as our Affirmations are of two Kinds, *viz.* either of Agreement or of Disagreement, between the Ideas compared; hence there is also a twofold Expression of our Judgments. In the Case of Agreement, the Copula alone suffices, because it is the proper Mark whereby we denote an Identity or Conjunction of Ideas. But where Perceptions disagree, there we must call in a negative Particle; and this gives us to understand, that the Affirmation implied in the Copula, is not of any Connection between the Subject and Predicate, but of their mutual Opposition and Repugnance.

How a Copula comes to be Part of a negative Proposition.

C H A P. III.

Of Universal and Particular Propositions.

I. THE next considerable Division of Propositions, is into *universal* and *particular*. Our Ideas, according to what has been already observed in the first Part, are all singular as they enter the Mind, and represent individual Objects. But as by Abstraction we can render them universal, so as to comprehend a whole Class of Things, and sometimes several Classes at once; hence the Terms expressing these Ideas, must be in like manner universal. If therefore we suppose any general Term to become the Subject of a Proposition, it is evident, that whatever is affirmed of the abstract Idea belonging to that Term, may be affirmed of all the Individuals to which that Idea extends. Thus when we

Division of Propositions into universal and particular.

say *Men are mortal*; we consider Mortality, not as confined to one or any Number of particular Men, but as what may be affirmed without Restriction of the whole Species. By this means the Proposition becomes as general as the Idea which makes the Subject of it, and indeed derives its Universality entirely from that Idea, being more or less so, according as this may be extended to more or fewer Individuals. But it is further to be observed of these general Terms, that they sometimes enter a Proposition in their full Latitude, as in the Example given above; and sometimes appear with a Mark of Limitation. In this last Case we are given to understand, that the Predicate agrees not to the whole universal Idea, but only to a Part of it; as in the Proposition, *some Men are wise*: for here Wisdom is not affirmed of every particular Man, but restrained to a few of the human Species.

Propositions
universal
wherefore
Subject is a
Term
Mark of Re-
striction.

II. Now from this different Appearance of the general Idea, that constitutes the Subject of any Judgment, arises the Division of Propositions into *universal* and *particular*. An *universal* Proposition is that, wherein the Subject is some general Term taken in its full Latitude, inasmuch that the Predicate agrees to all the Individuals comprehended

under it, if it denotes a proper Species; and to all the several Species, and their Individuals, if it marks an Idea of a higher Order. The Words *all*, *every*, *no*, *none*, &c. are the proper Signs of this Universality; and as they seldom fail to accompany general Truths, so they are the most obvious Criterion whereby to distinguish them. *All Animals have a Power of beginning Motion*. This is an universal Proposition; as we know from the Word *all*, prefixed to the Subject *Animal*, which denotes that it must be taken in its full Extent. Hence the Power of beginning Motion, may be affirmed of all the several Species of Animals; as of Birds, Quadrupeds, Insects, Fishes, &c. and of all the Individuals of which these different Classes consist, as of this Hawk, that Horse, and so for others.

Propositions
particular
wherefore
Subject is a
Term
Mark of
Limitation.

III. A *particular* Proposition has in like manner some general Term for its Subject, but with a Mark of Limitation added, to denote, that the Predicate agrees only to some of the Individuals comprehended under a Species, or to one or more of the Species belonging to any Genus, and not to the whole universal Idea. Thus, *Some Stones are*

heavier than Iron; *Some Men have an uncommon Share of Prudence*. In the last of these Propositions, the Subject *some Men*, implies only a certain Number of Individuals, comprehended under

under a single Species. In the former, where the Subject is a Genus, that extends to a great Variety of distinct Classes, *some Stones* may not only imply, any Number of particular Stones, but also several whole Species of Stones; inasmuch as there may be not a few, with the Property there described. Hence we see, that a Proposition does not cease to be particular, by the Predicate's agreeing to a whole Species, unless that Species singly and distinctly considered, makes also the Subject of which we affirm or deny. For if it belongs to some Genus, that has other Species under it, to which the Predicate does not agree; it is plain that where this Genus is that of which we affirm or deny, the Predicate agreeing only to a Part of it, and not to the whole general Idea, constitutes the Proposition particular.

IV. HERE then we have a sure and infallible Mark, whereby to distinguish between universal and particular Propositions. Where the Predicate agrees to all the Individuals comprehended under the Notion of the Subject, there the Proposition is universal; where it belongs only to some of them, or to some of the Species of the general Idea, there the Proposition is particular. This

A sure and infallible Criterion, whereby to distinguish between universal and particular Propositions.

Criterion is of easy Application, and much safer than to depend upon the common Signs of *all, every, some, none, &c.* because these being different in different Languages, and often varying in their Signification, are very apt in many Cases to mislead the Judgment. Thus if we say, *all the Soldiers, when drawn up, formed a Square of a hundred Men a Side*: it is evident, that the Predicate cannot be affirmed of the several Individuals, but of the whole collective Idea of the Subject; whence by the Rule given above, the Proposition is not universal. It is true, Logicians lay down many Observations, to enable us to distinguish aright on this Head; but if the Criterion here given be duly attended to, it will be of more real Service to us than a hundred Rules. For it is infallible, and may be applied with Ease; whereas the Directions which we meet with in Treatises of Logick, being drawn for the most part from the Analogy of Language, and common Forms of Speech, are not only burdensome to the Memory, but often very doubtful and uncertain in their Application.

V. THERE is still one Species of Propositions, that remains to be described; and which the more deserve our Notice, as it is not yet agreed among Logicians, to which of the two Classes mentioned above, they ought to be referred. I mean *singular*

Singular Propositions contained under the Idea of Particulars.

Propo-

Propositions ; or those where the Subject is an Individual. Of this Nature are the following : *Sir Isaac Newton was the Inventor of Fluxions ; This Book contains many useful Truths.* What occasions some Difficulty, as to the proper Rank of these Propositions, is ; that the Subject being taken according to the whole of its Extension, they sometimes have the same Effect in Reasoning, as Universals. But if it be considered, that they are in Truth the most limited Kind of particular Propositions, and that no Proposition can with any Propriety be called universal, but where the Subject is some universal Idea ; we shall not be long in determining, to which Class they ought to be referred. When we say, *Some Books contain useful Truths ;* the Proposition is particular, because the general Term appears with a Mark of Restriction. If therefore we say, *This book contains useful Truths ;* it is evident that the Proposition must be still more particular, as the Limitation implied in the Word *this*, is of a more confined Nature, than in the former Case. I know there are Instances, where singular Propositions have the same Effect in Reasoning, as Universals ; yet is not this, by reason of any proper Universality, belonging to them ; but because the Conclusion in such Cases being always singular, may be proved by a middle Term which is also singular ; as I could easily demonstrate, were this a proper Place, for entering into a Discussion of that Nature.

VI. WE see therefore, that all Propositions, *The Purpose Direction of Proposition.* are either *affirmative* or *negative* ; nor is it less evident, that in both Cases, they may be *universal* or *particular*. Hence arises, that celebrated four-fold Division of them, into *universal Affirmative*, and *universal Negative* ; *particular Affirmative*, and *particular Negative* ; which comprehends indeed all their Varieties. The Use of this Method of distinguishing them, will appear more fully afterwards, when we come to treat of Reasoning and Syllogism.

CHAP. IV.

Of Absolute and Conditional Propositions.

*Definition of
Essential and
accidental.*

I. **T**HE Objects about which we are chiefly conversant in this World, are all of a Nature liable to Change. What may be affirmed of them at one time, cannot often at another ; and it makes no small Part of our Knowledge, to distinguish



IV. OF INTUITION. 91

ish rightly these Variations, and trace the Reasons upon they depend. For it is observable, that amidst all the ide of Nature, some things remain constant and in-; nor even are the Changes to which we see others effected, but in consequence of uniform and steady which when known are sufficient to direct us in our ents about them. Hence Philosophers, in distinguishing jects of our Perception into various Classes, have been reful to note; that some Properties belong essentially to ernal Idea, so as not to be separable from it, but by de-; its very Nature; while others are only accidental, ay be affirmed or denied of it, in different Circum- . Thus, Solidity, a yellow Colour, and great Weight, isidered as essential Qualities of Gold; but whether it ist as an uniform conjoined Mass, is not alike necessary. e that by a proper Menstruum, it may be reduced to a owder, and that an intense Heat will bring it into a State ion.

Now from this Diversity in the several Qua- of Things, arises a considerable Difference e Manner of our judging about them. For first place, all such Properties, as are inse- : from Objects, when considered as belong- any Genus or Species, are affirmed abso- and without Reserve of that general Idea. Thus we *Gold is very weighty, a Stone is hard, Animals have ver of Self-motion.* But in the Case of mutable or ac- al Qualities, as they depend upon some other Considera- distinct from the general Idea; that also must be taken he Account, in order to form an accurate Judgment. l we affirm for instance of some Stones, that they are very ible of a rolling Motion; the Proposition while it re- in this general Form, cannot with any Advantage be uced into our Reasonings. An Aptness to receive that of Motion, flows from the Figure of the Stone; which may vary infinitely: our Judgment then only becomes able and determinate, when the particular Figure, of Volubility is a Consequence, is also taken into the int. Let us then bring in this other Consideration, and oposition will run as follows: *Stones of a spherical Form, sily put into a rolling Motion.* Here we see the Condition which the Predicate is affirmed, and therefore know in particular Cases the Proposition may be applied.

THIS Consideration of Propositions, respect- e Manner in which the Predicate is affirmed Subject, gives rise to the Division of them

Hence a consi- derable Di- versity in our Manner of Judging.

Which gives rise to the Division of

into

*Propositions
into absolute
and conditional.*

into *absolute* and *conditional*. *Absolute* Propositions are those, wherein we affirm some Property inseparable from the Idea of the Subject, and which therefore belongs to it in all possible Cases; as *God is infinitely wise. Virtue tends to the ultimate Happiness of Man*. But where the Predicate is not necessarily connected with the Idea of the Subject, unless upon some Consideration distinct from that Idea, there the Proposition is called *conditional*. The Reason of the Name is taken from the Supposition annexed, which is of the Nature of a Condition, and may be expressed as such. Thus; *If a Stone is exposed to the Rays of the Sun, it will contract some Degree of Heat. If a River runs in a very declining Channel, its Rapidity will constantly increase.*

The great Importance of this Division, and the use of Propositions.

IV. THERE is not any thing of greater Importance in Philosophy, than a due Attention to this Division of Propositions. If we are careful never to affirm Things absolutely, but where the Ideas are inseparably conjoined; and if in our other Judgments, we distinctly mark the Conditions, which determine the Predicate to belong to the Subject; we shall be the less liable to mistake, in applying general Truths, to the particular Concerns of human Life. It is owing to the exact Observance of this Rule, that Mathematicians have been so happy in their Discoveries; and that what they demonstrate of Magnitude in general, may be applied with Ease in all obvious Occurrences.

And reduces them from Particulars to Generals.

V. THE Truth of it is, particular Propositions are then known to be true, when we can trace their Connection with Universals; and it is accordingly the great Business of Science, to find out general Truths, that may be applied with Safety in all obvious Instances. Now the great Advantage arising, from determining with Care the Conditions, upon which one Idea may be affirmed or denied of another, is this; that thereby particular Propositions really become universal, may be introduced with Certainty into our Reasonings, and serve as Standards to conduct and regulate our Judgments. To illustrate this by a familiar Instance. If we say, *Some Water acts very forcibly*; the Proposition is particular: and as the Conditions on which this forcible Action depends, are not mentioned, it is as yet uncertain in what Cases it may be applied. Let us then supply these Conditions, and the Proposition will run thus; *Water conveyed in sufficient Quantity, along a steep Descent, acts very forcibly*. Here we have an universal Judgment, inasmuch as the Predicate *forcible Action*, may be ascribed

ascribed to all Water under the Circumstances mentioned. Nor is it less evident, that the Proposition in this new Form, is of easy Application; and in fact we find, that Men do apply it, in Instances where the forcible Action of Water is required; as in Corn-Mills, and many other Works of Art. Thus we see in what manner we are to proceed, in order to arrive at universal Truths, which is the great End and Aim of Science. And indeed, would Men take the same Care, duly to express the Conditions on which they affirm and deny, as Mathematicians do, in those Theorems which they term hypothetical; I doubt not, but we might be able to deduce many Truths, in other Parts of Philosophy, with no less Clearness, Force, and Perspicuity, than has hitherto been thought peculiar to the Science of Quantity.

C H A P. V.

Of Simple and Compound Propositions.

I. **H**ITHERTO we have treated of Propositions, where only two Ideas are compared together. These are in the general called *simple*; because having but one Subject and one Predicate, they are the Effect of a simple Judgment, that admits of no Subdivision. But if it so happens, that several Ideas offer themselves to our Thoughts at once, whereby we are led to affirm the same thing of different Objects, or different Things of the same Object; the Propositions expressing these Judgments are called *compound*: because they may be resolved into as many others, as there are Subjects or Predicates, in the whole complex Determination of the Mind. Thus: *God is infinitely wise, and infinitely powerful.* Here there are two Predicates, *infinite Wisdom, and infinite Power*, both affirmed of the same Subject; and accordingly, the Proposition may be resolved into two others, affirming these Predicates severally. In like manner in the Proposition, *Neither Kings nor People are exempt from Death*; the Predicate is denied of both Subjects, and may therefore be separated from them, in distinct Propositions. Nor is it less evident, that if a complex Judgment consists of several Subjects and Predicates, it may be resolved into as many simple Propositions as are the Number of different Ideas compared together. *Riches and Honours, are apt to elate the Mind, and increase the Number*
of

*Division of
Propositions
into simple
and compound.*

of our Desires. In this Judgment, there are two Subjects and two Predicates, and it is at the same time apparent, that it may be resolved into four distinct Propositions. *Riches are apt to elate the Mind. Riches are apt to increase the Number of our Desires.* And so of Honours.

II. LOGICIANS have divided these compound Propositions, into a great many different Classes; but in my Opinion, not with a due Regard to their proper Definition. Thus *Conditionals, Causals, Relations, &c.* are mentioned as so many distinct Species of this kind, though in fact they are no more than simple Propositions. To give an Instance of a Conditional: *If a Stone is exposed to the Rays of the Sun, it will contract some Degree of Heat.* Here we have but one Subject and one Predicate; for the complex Expression, *A Stone exposed to the Rays of the Sun*, constitutes the proper Subject of this Proposition, and is no more than one determinate Idea. The same thing happens in Causals. *Rehoboam was unhappy because he followed evil Counsel.* I deny not that there is here an Appearance of two Propositions, arising from the Complexity of the Expression; but when we come to consider the Matter more nearly, it is evident, that we have but a single Subject and Predicate. *The Pursuit of evil Counsel brought Misery upon Rehoboam.* It is not enough therefore to render a Proposition compound, that the Subject and Predicate are complex Notions, requiring sometimes a whole Sentence to express them: for in this Case, the Comparison is still confined to two Ideas, and constitutes what we call a simple Judgment. But where there are several Subjects, or Predicates, or both, as the Affirmation or Negation may be alike extended to them all, the Proposition expressing such a Judgment, is truly a Collection of as many simple ones, as there are different Ideas compared. Confining ourselves therefore, to this more strict and just Notion of compound Propositions, they are all reducible to two Kinds, viz. *Copulatives* and *Disjunctives*.

III. A *Copulative* Proposition is, where the Subjects and Predicates are so linked together, that they may be all severally affirmed or denied one of another. Of this Nature are the Examples of compound Propositions given above. *Riches and Honours are apt to elate the Mind, and increase the Number of our Desires. Neither Kings nor People are exempt from Death.* In the first of these the two Predicates may be affirmed severally of each Subject, whence we have four distinct Propositions. The other furnishes an Example of the negative Kind,

Kind, where the same Predicate being disjoined from both Subjects, may be also denied of them in separate Propositions.

IV. THE other Species of compound Propositions, are those called Disjunctives; in which, Or Disjunctive. comparing several Predicates with the same Subject, we affirm that one of them necessarily belongs to it, but leave the particular Predicate undetermined. If any one for example says: *This World either exists of itself, or is the Work of some all-wise and powerful Cause*; it is evident, that one of the two Predicates must belong to the World; but as the Proposition determines not which, it is therefore of the kind we call *Disjunctive*. Such too are the following. *The Sun either moves round the Earth, or is the Center about which the Earth revolves. Friendship finds Men equal, or makes them so.* It is the Nature of all Propositions of this Class, supposing them to be exact in Point of Form; that upon determining the particular Predicate, the rest are of course to be removed; or if all the Predicates but one are removed, that one necessarily takes place. Thus in the Example given above; if we allow the World to be the Work of some wise and powerful Cause, we of course deny it to be self-existent; or if we deny it to be self-existent, we must necessarily admit that it was produced by some wise and powerful Cause. Now this particular Manner of linking the Predicates together, so that the establishing one, displaces all the rest; or the excluding all but one, necessarily establishes that one; cannot otherwise be effected, than by means of *disjunctive* Particles. And hence it is, that Propositions of this Class, take their Name from these Particles, which make so necessary a Part of them, and indeed constitute their very Nature, considered as a distinct Species. But I shall reserve what farther might be said on this Head, till I come to treat of Reasoning, where the great Use and Importance of disjunctive Propositions, will better appear.

CHAP. VI.

Of the Division of Propositions into Self-evident and Demonstrable.:

I. **A**S we are soon to enter upon the third Design of this Chapter. Part of Logick which treats of Reasoning, and as the Art of Reasoning lies, in deducing Propositions whose Truth does not immediately appear, from others
more

more known; it will be proper before we proceed any farther, to examine a little the different Degrees of Evidence that accompany our Judgments; that we may be the better able to distinguish, in what Cases we ought to have recourse to Reasoning, and what those Propositions are, upon which as a sure and unerring Foundation, we may venture to build the Truth of others.

*Propositions
demonstrable
by Reasoning
are called
demonstrable
Propositions.*

II. WHEN any Proposition is offered to the View of the Mind, if the Terms in which it is expressed are understood; upon comparing the Ideas together, the Agreement or Disagreement asserted is either immediately perceived, or found to lie beyond the present Reach of the Understanding. In the first Case the Proposition is said to be *self-evident*, and admits not of any Proof, because a bare Attention to the Ideas themselves, produces full Conviction and Certainty; nor is it possible to call in any thing more evident, by way of Confirmation. But where the Connection or Repugnance comes not so readily under the Inspection of the Mind, there we must have recourse to Reasoning; and if by a clear Series of Proofs we can make out the Truth proposed, inasmuch that Self-evidence shall accompany every Step of the Procedure, we are then able to demonstrate what we assert, and the Proposition itself is said to be *demonstrable*. When we affirm for instance, *that it is impossible for the same thing to be and not to be*; whoever understands the Terms made use of, perceives at first Glance the Truth of what is asserted; nor can he by any Efforts, bring himself to believe the contrary. The Proposition therefore is *self-evident*, and such, that it is impossible by Reasoning to make it plainer; because there is no Truth more obvious, or better known, from which as a Consequence it may be deduced. But if we say, *This World had a Beginning*; the Assertion is indeed equally true, but shines not forth with the same Degree of Evidence. We find great Difficulty in conceiving how the World could be made out of nothing; and are not brought to a free and full Consent, until by Reasoning we arrive at a clear View of the Absurdity involved in the contrary Supposition. Hence this Proposition is of the kind we call *demonstrable*, inasmuch as its Truth is not immediately perceived by the Mind, but yet may be made appear by means of others more known and obvious, whence it follows as an unavoidable Consequence.

*Propositions
demonstrable
by Reasoning
are called
demonstrable
Propositions.*

III. FROM what has been said it appears, that Reasoning is employed only about demonstrable Propositions, and that our intuitive and self-evident Perceptions

Perceptions, are the ultimate Foundation on which it rests. And now we see clearly the Reason, why in the Distinction of the Powers of the Understanding, as explained in the Introduction to this Treatise, the second Operation of the Mind was confined wholly to *intuitive Acts*. Our first Step to the Way of Knowledge is, to furnish ourselves with Ideas. When these are obtained, we next set ourselves to compare them together, in order to judge of their Agreement or Disagreement. If the Relations we are in quest of, lie immediately open to a View of the Mind, the Judgments expressing them are self-evident; and the Act of the Mind forming these Judgments, is what we call *Intuition*. But if upon comparing our Ideas together, we cannot readily and at once trace their Relation, it then becomes necessary to employ Search and Examination, and call in the Assistance of self-evident Truths, which is what we properly term *Reasoning*. Every Judgment therefore that is not intuitive, being gained by an Exercise of the Reasoning Faculty, necessarily belongs to the third Operation of the Mind, and ought to be referred to it in a just Division of the Powers of the Understanding. And indeed it is with this View chiefly, that we have distinguished Propositions into self-evident and demonstrable. Under the first Head are comprehended all our intuitive Judgments, that is, all belonging to the second Operation of the Mind. Demonstrable Propositions are the proper Province of the Reasoning Faculty, and constitute by far the most considerable Part of human Knowledge. Indeed *Reason* extends also to Matters of Experience and Testimony, where the Proofs adduced, are not of the Kind called Demonstration. But I am here only considering the Powers of the Mind, as employed in tracing the Relations between its own Ideas, in which View of Things, every true Proposition is demonstrable; though very often we find ourselves incapable, of discovering and applying those intermediate Ideas, upon which the Demonstration depends.

IV. DEMONSTRABLE Propositions therefore, belonging properly to the third Operation of the Mind, I shall for the present dismit them, and return to the Consideration of self-evident Truths. These, as I have already observed, furnish the first Principles of Reasoning; and it is certain, that if in our Researches, we employ only such Principles as have this Character of Self-evidence, and apply them according to the Rules to be afterwards explained, we shall be in no Danger of Error, in advancing from one Discovery to another. For this I may

*Self-evident
Truths the first
Principles of
Reasoning.*

appeal to the Writings of the Mathematicians, which being conducted by the express Model here mentioned, are an incontestible Proof, of the Firmness and Stability of human Knowledge, when built upon so sure a Foundation. For not only have the Propositions of this Science stood the Test of Ages; but are found attended with that invincible Evidence, as forces the Assent of all, who duly consider the Proofs upon which they are established. Since then Mathematicians are universally allowed, to have hit upon the right Method of arriving at Truths; since they have been the happiest in the Choice, as well as Application of their Principles; it may not be amiss to explain here, the Division they have given of self-evident Propositions; that by treading in their Steps, we may learn something of that Justness and Solidity of Reasoning, for which they are so deservedly esteemed.

*Definitions a
great help to
Clearness and
Evidence in
Knowledge.*

V. FIRST then it is to be observed, that they have been very careful in ascertaining their Ideas, and fixing the Signification of their Terms. For this Purpose they begin with *Definitions*, in which the Meaning of their Words is so distinctly explained, that they cannot fail to excite in the Mind of an attentive Reader, the very same Ideas as are annexed to them by the Writer. And indeed I am apt to think, that the Clearness and irresistible Evidence of Mathematical Knowledge, is owing to nothing so much, as this Care in laying the Foundation. Where the Relation between any two Ideas are accurately and justly traced; it will not be difficult for another to comprehend that Relation, if in setting himself to discover it, he brings the very same Ideas into Comparison. But if, on the contrary, he affixes to his Words, Ideas different from those that were in the Mind of him who first advanced the Demonstration; it is evident, that as the same Ideas are not compared, the same Relation cannot subsist, insomuch that a Proposition will be rejected as false, which, had the Terms been rightly understood, must have appeared unexceptionably true. A Square for Instance is a Figure, bounded by four equal right Lines, joined together at right Angles. Here the Nature of the Angles makes no less a Part of the Idea, than the Equality of the Sides; and many Properties demonstrated of the Square, flow entirely from its being a rectangular Figure. If therefore we suppose a Man, who has formed a partial Notion of a Square, comprehending only the Equality of its Sides, without Regard to the Angles, reading some Demonstration that implies also this latter Consideration; it is plain he would reject it as not universally true, inasmuch



VI. or INTUITION. 99

as it could not be applied, where the Sides were joined at unequal Angles. For this last Figure, answering his Idea of a Square, would be yet found without property assigned to it in the Proposition. But if he comes to correct his Notion, and render his Idea compleat, he then readily own the Truth and Justness of the Demonstration.

We see therefore, that nothing contributes much to the Improvement and Certainty of human Knowledge, as the having determinate and keeping them steady and invariable in our Discourses and Reasonings about them. In this Account it is, that Mathematicians, before observed, always begin by defining Terms, and distinctly unfolding the Notions here intended to express. Hence such as apply themselves to these Studies, have exactly the same Views of Things, bringing always the very same Ideas into Comparison, and discern the Relations between them, when clearly and fully represented. Nor is there any more natural and easy Reason, for the universal Reception given to Mathematical Truths, and for that Harmony and Correspondence of Arguments, which makes the distinguishing Character of the *Operati* of this Class.

Mathematicians by beginning with them, procure a ready Reception to the Truths they advance.

WHEN they have taken this first Step, made known the Ideas, whose Relations they are to investigate; their next Care is, to lay some self-evident Truths, which may serve as a Foundation for their future Reasonings. And indeed they proceed with remarkable Circumference, admitting no Principles, but what flow immediately from their Definitions, and necessarily force themselves on a Mind, in any Degree attentive to its Perceptions. A *Circle* is a Figure formed by a right Line, moving round some fixed Point in the same Plane. The fixed Point is that to which the Line is supposed to move, and where one of its Extremities terminate, is called the *Center* of the Circle. The other Extremity, which is conceived to be carried round, and returns to the Point whence it first set out, describes the *Circumference*. Right Lines drawn from the Center to the Circumference, are called *Radii*. From these Definitions compared, Geometers derive this self-evident Truth; *that the Radii of the Circle are all equal to one another*. I call it self-evident, because nothing more is required, to lay it open to the immediate

The Establishment of Principles, the second Step in Mathematical Knowledge.

mediate Perception of the Mind, than an Attention to the Ideas compared. For from the very Genesis of a Circle it is plain, that the Circumference is every where distant from the Center, by the exact Length of the describing Line; and that the several Radii are in Truth nothing more, than one and the same Line variously posited within the Figure. This short Description will I hope serve, to give some little Insight into the Manner of deducing Mathematical Principles, as well as into the Nature of that Evidence which accompanies them.

VIII. AND now I proceed to observe, that in all Propositions, we either affirm or deny some Property of the Idea that constitutes the Subject of our Judgment, or we maintain that something may be done or effected. The first Sort are called *speculative Propositions*, as in the Example mentioned above, *the Radii of the same Circle are all equal one to another*. The others are called *practical*, for a Reason too obvious to be mentioned; thus, *that a right Line may be drawn from one Point to another*, is a practical Proposition; inasmuch as it expresses that something may be done.

Hence Mathematical Principles are divided into speculative and practical.

IX. FROM this twofold Consideration of Propositions, arises the twofold Division of Mathematical Principles, into *Axioms* and *Postulates*. By an *Axiom* they understand any self-evident *speculative Truth*; as *that the whole is greater than its Parts: That Things equal to one and the same Thing, are equal to one another*. But a self-evident *practical Proposition* is what they call a *Postulate*. Such are those of *Euclid*; *that a finite Right-Line may be continued directly forwards: That a Circle may be described about any Center with any Distance*. And here we are to observe, that as in an *Axiom*, the Agreement or Disagreement between the Subject and Predicate, must come under the immediate Inspection of the Mind; so in a *Postulate*, not only the Possibility of the Thing asserted, must be evident at first View, but also the Manner in which it may be effected. For where this Manner is not of itself apparent, the Proposition comes under the Notion of the demonstrable kind, and is treated as such by Geometrical Writers. Thus, *to draw a Right-Line from one Point to another*; is assumed by *Euclid* as a *Postulate*, because the Manner of doing it is so obvious, as to require no previous Teaching. But then it is not equally evident, *how we are to construct an equilateral Triangle*. For this Reason he advances it as a demonstrable Proposition, lays down Rules for the exact Performance,

and at the same time proves, that if these Rules are, the Figure will be justly described.

This naturally leads me to take notice, *self-evident Truths* are distinguished into *Kinds*, according as they are speculative

And demonstrable Propositions into Theorems and Problems.

ical; so is it also with *demonstrable Propositions*. A demonstrable speculative Proposition, mathematicians called a *Theorem*. Such is the 47th Proposition of the first Book of the *Elements*, known by the Name of the *Pythagoric Theorem*, from its supposed Author, *Pythagoras*, viz. *That in every right-angled Triangle, the Square described upon the Side subtending the Right-Angle, is equal to the Sum of the Squares described upon the Sides containing the Right-Angle*. On the other hand, a demonstrable practical Proposition, is called a *Problem*; as where *Euclid* teaches us, *to describe a Square upon a given Right-Line*.

SINCE I am upon this Subject, it may not be to add, that besides the four Kinds of Propositions already mentioned, Mathematicians have a fifth, known by the Name of *Corollaries*. These are usually subjoined to *Theorems*, or *Problems*.

Corollaries are obvious Deductions from Theorems or Problems.

and differ from them only in this; that they flow from the Propositions they are demonstrated in so obvious a Manner, as to discover their Dependence upon the Proposition whence they are deduced, almost as soon as proposed. Thus *Euclid* having demonstrated, *that in every right-lined Triangle, all the three Angles taken together are equal to two Right-Angles*; adds by Corollary, *that all the three Angles of any one Triangle taken together, are equal to all the three Angles of any other Triangle taken together*: which is evident at first Sight; because in all Cases they are equal to two right ones, and Things equal to one and the same thing, are equal to one another.

THE last Thing I shall take notice of in the Use of the Mathematicians, is what they call *Scholia*. They are indifferently annexed to Propositions, or Corollaries; and serve the same Purposes as Annotations upon an Author. For in them Occasion is taken,

Scholia serve the Purpose of Annotations or Comments.

in whatever may appear intricate and obscure in a Treatise; to answer Objections; to teach the Application and Uses of Propositions; to lay open the Original and Foundation of the several Discoveries made in the Science; and to acquaint us with all such Particulars as deserve to be known, whether considered as Points of Curiosity or

*This Method
of the Mathe-
maticians uni-
versal, and a
sure Guide to
Certainty.*

XIII. THUS we have taken a short View of the so much celebrated Method of the Mathematicians; which to any one who considers it with a proper Attention, must needs appear universal, and equally applicable in other Sciences. They begin with Definitions. From these they deduce their Axioms and Postulates, which serve as Principles of Reasoning; and having thus laid a firm Foundation, advance to Theorems and Problems, establishing all by the strictest Rules of Demonstration. The Corollaries flow naturally and of themselves. And if any Particulars are still wanting, to illustrate a Subject, or compleat the Reader's Information; these, that the Series of Reasoning may not be interrupted or broken, are generally thrown into Scholia. In a System of Knowledge so uniform and well connected, no wonder if we meet with Certainty; and if those Clouds and Darknессes, that deface other Parts of human Science, and bring Discredit even upon Reason itself, are here scattered and disappear.

*Self-evident
Truths known
by the appa-
rent unavoid-
able Connec-
tion, between
the Subject
and Predicate.*

XIV. BUT I shall for the present wave these Reflections, which every Reader of Understanding is able to make of himself, and return to the Consideration of self-evident Propositions. It will doubtless be expected, after what has been here said of them, that I should establish some *Criteria* or Marks, by which they may be distinguished. But I frankly own my Inability in this respect, as not being able to conceive any thing in them, more obvious and striking, than that Self-evidence which constitutes their very Nature. All I have therefore to observe on this Head is, that we ought to make it our first Care, to obtain clear and determinate Ideas. When afterwards we come to compare these together, if we perceive between any of them a necessary and unavoidable Connection, insomuch that it is impossible to conceive them existing asunder, without destroying the very Ideas compared; we may then conclude, that the Proposition expressing this Relation, is a Principle, and of the kind we call self-evident. In the Example mentioned above, *The Radii of the same Circle are all equal between themselves*, this intuitive Evidence shines forth in the clearest manner; it being impossible for any one who attends to his own Ideas, not to perceive the Equality here asserted. For as the Circumference is every where distant from the Center, by the exact Length of the describing Line; the Radii drawn from the Center into the Circumference, being severally equal to this one Line, must needs also be equal among themselves. If we suppose
the

the Radii unequal, we at the same time suppose the Circumference more distant from the Center in some Places than in others ; which Supposition, as it would exhibit a Figure quite different from a Circle, we see there is no separating the Predicate from the Subject in this Proposition, without destroying the Idea, in relation to which the Comparison was made. The same thing will be found to hold, in all our other intuitive Perceptions, insomuch that we may establish this as an universal *Criterion*, whereby to judge of and distinguish them. I would not however be understood to mean, as if this ready View of the unavoidable Connection between some Ideas, was any thing really different from Self-evidence. It is indeed nothing more than the Notion of Self-evidence a little unfolded, and as it were laid open to the Inspection of the Mind. Intuitive Judgments need no other distinguishing Marks, than that Brightness which surrounds them ; in like manner as Light discovers itself by its own Presence, and the Splendor it universally diffuses. But I have said enough of self-evident Propositions, and shall therefore now proceed to those of the demonstrable kind ; which being gained in Consequence of Reasoning, naturally leads us to the third Part of Logick, where this Operation of the Understanding is explained.



THE
ELEMENTS
OF
LOGICK.

BOOK III.
Of REASONING.

CHAP. I.

Of Reasoning in general, and the Parts of which it consists.

Remote Relations discovered by means of intermediate Ideas. I. **W**E have seen how the Mind proceeds in furnishing itself with Ideas, and framing intuitive Perceptions. Let us next enquire into the Manner of discovering those more remote Relations, which lying at a Distance from the Understanding, are not to be traced, but by means of a higher Exercise of its Powers. It often happens in comparing Ideas together, that their Agreement or Disagreement cannot be discerned at first View, especially if they are of such a Nature, as not to admit of an exact Application one to another. When for instance we compare two Figures of a different Make, in order to judge of their Equality or Inequality, it is plain, that by barely considering the Figures themselves, we cannot arrive at an exact Determination; because by reason of their disagreeing Forms, it is impossible so to put them together, as that their several Parts shall mutually coincide. Here then it becomes

becomes necessary to look out for some third Idea, that will admit of such an Application as the present Case requires; wherein if we succeed, all Difficulties vanish, and the Relation we are in quest of may be traced with Ease. Thus right-lined Figures are all reduced to Squares, by means of which we can measure their Areas, and determine exactly their Agreement or Disagreement in point of Magnitude.

II. It now is to be asked, how any third Idea can serve to discover a Relation between two others: I answer, by being compared severally with these others; for such a Comparison enables us to see how far the Ideas with which this third is compared, are connected or disjoined between themselves. In the Example mentioned above of two right-lined Figures, if we compare each of them with some Square whose Area is known, and find the one exactly equal to it, and the other less by a Square-Inch, we immediately conclude, that the Area of the first Figure is a Square-Inch greater than that of the second. This Manner of determining the Relation between any two Ideas, by the Intervention of some third with which they may be compared, is that which we call *Reasoning*, and is indeed the chief Instrument, by which we push on our Discoveries, and enlarge our Knowledge. The great Art lies, in finding out such intermediate Ideas, as when compared with the others in the Question, will furnish evident and known Truths, because as will afterwards appear, it is only by means of them, that we arrive at the Knowledge of what is hidden and remote.

This manner of arriving at Truth termed Reasoning.

III. FROM what has been said it appears, that every Act of Reasoning, necessarily includes three distinct Judgments; two wherein the Ideas whose relation we want to discover, are severally compared with the middle Idea, and a third wherein they are themselves connected or disjoined, according to the Result of that Comparison. Now as in the second Part of Logick, our Judgments when put into Words were called Propositions, so here in the third Part, the Expressions of our Reasonings are termed *Syllogisms*. And hence it follows, that as every Act of Reasoning implies three several Judgments, so every Syllogism must include three distinct Propositions. When a Reasoning is thus put into Words, and appears in Form of a Syllogism, the intermediate Idea made use of to discover the Agreement or Disagreement we search for, is called the *middle Term*; and the two Ideas themselves, with which this third is compared, go by the Name of the *Extremes*.

The Parts that constitute an Act of Reasoning and a Syllogism.

IV. BUT

IV. BUT as these things are best illustrated by Examples; let us for instance set ourselves to enquire, *Whether Men are accountable for their Actions.* As the Relation between the Ideas of *Man* and *Accountableness* comes not within the immediate View of the Mind, our first Care must be, to find out some third Idea, that will enable us the more easily to discover and trace it. A very small Measure of Reflection is sufficient to inform us, that no Creature can be accountable for his Actions, unless we suppose him capable of distinguishing the good from the bad; that is, unless we suppose him possessed of Reason. Nor is this alone sufficient. For what would it avail him to know good from bad Actions, if he had no Freedom of Choice, nor could avoid the one, and pursue the other? Hence it becomes necessary to take in both Considerations in the present Case. It is at the same time equally apparent, that where-ever there is this Ability of distinguishing good from bad Actions, and of pursuing the one and avoiding the other, there also a Creature is accountable. We have then got a third Idea, with which *Accountableness* is inseparably connected, *viz. Reason and Liberty*; which are here to be considered as making up one complex Conception. Let us now take this middle Idea, and compare it with the other Term in the Question, *viz. Man*, and we all know by Experience, that it may be affirmed of him. Having thus by means of the intermediate Idea formed two several Judgments, *viz. that Man is possessed of Reason and Liberty*; and *that Reason and Liberty imply Accountableness*; a third obviously and necessarily follows, *viz. that Man is accountable for his Actions.* Here then we have a compleat Act of Reasoning, in which, according to what has been already observed, there are three distinct Judgments; two that may be stiled previous, inasmuch as they lead to the other, and arise from comparing the middle Idea, with the two Ideas in the Question: the third is a Consequence of these previous Acts, and flows from combining the extreme Ideas between themselves. If now we put this Reasoning into Words, it exhibits what Logicians term a Syllogism, and when proposed in due Form, runs thus:

Every Creature possessed of Reason and Liberty is accountable for his Actions.

Man is a Creature possessed of Reason and Liberty.

Therefore Man is accountable for his Actions.

IV. IN this Syllogism we may observe, that there are three several Propositions, expressing the three Judgments implied in the Act of Reasoning.

Premiss,
Conclusion,
Extremes,
middle Term.

ing, and so disposed, as to represent distinctly what passes within the Mind, in tracing the more distant Relations of its Ideas. The two first Propositions answer the two previous Judgements in Reasoning, and are called the *Premisses*, because they are placed before the other. The third is termed the *Conclusion*, as being gained in consequence of what was asserted in the *Premisses*. We are also to remember, that the Terms expressing the two Ideas whose Relation we enquire after, as here *Man* and *Accountableness*, are in general called the *Extremes*; and that the intermediate Idea, by means of which the Relation is traced, viz. *A Creature possessed of Reason and Liberty*, takes the Name of the *middle Term*. Hence it follows, that by the *Premisses* of a Syllogism, we are always to understand the two Propositions, where the middle Term is severally compared with the *Extremes*; for these constitute the previous Judgments, whence the Truth we are in quest of is by Reasoning deduced. The *Conclusion* is that other Proposition, in which the *Extremes* themselves are joined or separated, agreeably to what appears upon the above Comparison. All this is evidently seen in the foregoing Syllogism, where the two first Propositions which represent the *Premisses*, and the third that makes the *Conclusion*, are exactly agreeable to the Definitions here given.

VI. BEFORE we take leave of this Article, it will be farther necessary to observe, that as the Conclusion is made up of the extreme Terms of the Syllogism, so that Extreme, which serves as the Predicate of the Conclusion, goes by the Name of the *Major Term*: the other Extreme, which makes the Subject in the same Proposition, is called the *Minor Term*. From this Distinction of the Extremes, arises also a Distinction between the *Premisses*, where these Extremes are severally compared with the middle Term. That Proposition which compares the greater Extreme, or the Predicate of the Conclusion with the middle Term; is called the *Major Proposition*: the other, wherein the same middle Term is compared with the Subject of the Conclusion, or lesser Extreme; is called the *Minor Proposition*. All this is obvious from the Syllogism already given, where the Conclusion is, *Man is accountable for his Actions*. For here the Predicate *Accountable for his Actions*, being connected with the middle Term in the first of the two *Premisses*; *Every Creature possessed of Reason and Liberty is accountable for his Actions*, gives what we call the *Major Proposition*. In the second of the *Premisses*; *Man is a Creature possessed of Reason and Liberty*, we find the lesser Ex-

*Major and
Minor Term,
Major and
Minor Pro-
position.*

trême,

treame, or Subject of the Conclusion, viz. *Man*, connected with the same middle Term, whence it is known to be the *Minor Proposition*. I shall only add, that when a Syllogism is proposed in due Form, the Major Proposition is always placed first, the Minor next, and the Conclusion last, according as we have done in that offered above.

*Judgment and
Proposition,
Reasoning and
Syllogism, dis-
tinguished.*

VII. HAVING thus cleared the Way, by explaining such Terms, as we are likely to have occasion for in the Progress of this Treatise; it may not be amiss to observe, that though we have carefully distinguished between the *Act of Reasoning*, and a *Syllogism*, which is no more than the Expression of it, yet common Language is not so critical on this Head; the Term *Reasoning* being promiscuously used to signify, either the Judgments of the Mind as they follow one another in Train, or the Propositions expressing these Judgments. Nor need we wonder that it is so, inasmuch as our Ideas and the Terms appropriated to them, are so connected by Habit and Use, that our Thoughts fall as it were spontaneously into Language, as fast as they arise in the Mind; so that even in our Reasonings within ourselves, we are not able wholly to lay aside Words. But notwithstanding this strict Connection between *mental* and *verbal* Reasoning, if I may be allowed that Expression, I thought it needful here to distinguish them, in order to give a just Idea of the Manner of deducing one Truth from another. While the Mind keeps the Ideas of Things in View, and combines its Judgments according to the real Evidence attending them, there is no great Danger of Mistake in our Reasonings, because we carry our Conclusions no farther than the Clearness of our Perceptions warrant us. But where we make use of Words the Case is often otherwise; nothing being more common than to let them pass, without attending to the Ideas they represent; insomuch that we frequently combine Expressions, which upon Examination appear to have no determinate Meaning. Hence it greatly imports us to distinguish between Reasoning and Syllogism; and to take care that the one be in all Cases the true and just Representation of the other. However, as I am unwilling to recede too far from the common Forms of Speech, or to multiply Distinctions without Necessity, I shall henceforward consider Propositions as representing the real Judgments of the Mind, and Syllogisms as the true Copies of our Reasonings; which indeed they ought always to be, and undoubtedly always will be, to Men who think justly, and are desirous of arriving at Truth. Upon this Supposition there will be no Danger in

using the Words Judgment and Proposition promiscuously; or in considering Reasoning as either a Combination of various Judgments, or of the Propositions expressing them; because being the exact Copies one of another, the Result will be in all Cases the same. Nor is it a small Advantage that we can thus conform to common Speech, without confounding our Ideas, or running into Ambiguity. By this means we bring ourselves upon a Level with other Men, readily apprehend the Meaning of their Expressions, and can with Ease convey our own Notions and Sentiments in their Minds.

VIII. THESE Things premised, we may in the general define Reasoning, *to be an Act or Operation of the Mind, deducing some unknown Proposition, from other previous ones that are evident and known.*

In a single Act of Reasoning, the Premises must be intuitive Truths.

These previous Propositions, in a simple Act of Reasoning, are only two in Number; and it is always required that they be of themselves apparent to the Understanding, inasmuch that we assent to and perceive the Truth of them as soon as proposed. In the Syllogism given above, the Premises are supposed to be self-evident Truths, otherwise the Conclusion could not be inferred by a single Act of Reasoning. If for instance in the Major, *Every Creature possessed of Reason and Liberty is accountable for his Actions*, the Connection between the Subject and Predicate could not be perceived by a bare Attention to the Ideas themselves; it is evident, that this Proposition would no less require a Proof, than the Conclusion deduced from it. In this Case a new middle Term must be sought for, to trace the Connection here supposed; and this of course furnishes another Syllogism, by which having established the Proposition in question, we are then and not before at liberty to use it in any succeeding Train of Reasoning. And should it so happen that in this second Essay, there was still some previous Proposition whose Truth did not appear at first Sight; we must then have recourse to a third Syllogism, in order to lay open that Truth to the Mind; because so long as the Premises remain uncertain, the Conclusion built upon them must be so too. When by conducting our Thoughts in this manner, we at last arrive at some Syllogism, where the previous Propositions are intuitive Truths; the Mind then rests in full Security, as perceiving that the several Conclusions it has passed through, stand upon the immoveable Foundation of Self-evidence, and when traced to their Source terminate in it.

*Reasoning in
the last
Exercise of it
only a Con-
tinuation of
Syllogisms.*

IX. WE see therefore, that in order to infer a Conclusion by a single Act of Reasoning, the Premisses must be intuitive Propositions. Where they are not, previous Syllogisms are required, in which Case Reasoning becomes a complicated Act, taking in a Variety of successive Steps. This frequently happens in tracing the more remote Relation of our Ideas, where many middle Terms being called in, the Conclusion cannot be made out, but in consequence of a Series of Syllogisms following one another in Train. But although in this Concatenation of Propositions, those that form the Premisses of the last Syllogism, are often considerably removed from Self-evidence; yet if we trace the Reasoning backwards, we shall find them the Conclusions of previous Syllogisms, whose Premisses approach nearer and nearer to Intuition, in proportion as we advance, and are found at last to terminate in it. And if, after having thus unravelled a Demonstration, we take it the contrary Way; and observe how the Mind setting out with intuitive Perceptions, couples them together to form a Conclusion, how by introducing this Conclusion into another Syllogism, it still advances one Step farther; and so proceeds, making every new Discovery subservient to its future Progress; we shall then perceive clearly, that Reasoning in the highest Exercise of that Faculty is no more than an orderly Combination of those simple Acts, which we have already so fully explained. The great Art lies, in so adjusting our Syllogisms one to another, that the Propositions severally made use of as Premisses, may be manifest Consequences of what goes before. For as by this Means, every Conclusion is deduced from known and established Truths, the very last in the Series, how far soever we carry it, will have no less Certainty attending it, than the original intuitive Perceptions themselves, in which the whole Chain of Syllogisms takes its Rise.

*Repeating
the same Co-
nclusion in
every Step of
the Progress.*

X. THUS we see, that Reasoning beginning with first Principles, rises gradually from one Judgment to another, and connects them in such manner, that every Stage of the Progression brings intuitive Certainty along with it. And now at length we may clearly understand the Definition given above of this distinguishing Faculty of the human Mind. Reason we have said is the Ability of deducing unknown Truths, from Principles or Propositions that are already known. This evidently appears by the foregoing Account, where we see, that no Proposition is admitted into a Syllogism, to serve as one of the previous Judgments on which the Conclusion rests,

which is itself a known and established Truth, its Connexion with self-evident Principles has been traced.

There is yet another Observation which self-evident Truths, the ultimate Foundation of all Science and Certainty.

Self-evident Truths, the ultimate Foundation of all Science and Certainty.

Towards the End of the last Part we divided Propositions into self-evident and demonstrable, and represented the self-evident kind, as the Foundation on which the whole Superstructure of human Science rested. This Doctrine is now abundantly confirmed by what has been delivered in the present Chapter. We have found that every Discovery of human Reason is the Consequence of a Train of Syllogisms, when traced to their Source, always terminate in self-evident Perceptions. When the Mind arrives at these primitive Truths, it pursues not its Enquiries farther, as well knowing that no Evidence can exceed that which flows from an immediate View of the Agreement or Disagreement between Ideas. And hence it is, that in unravelling any Part of Knowledge, in order to come at the Foundation on which it is built, intuitive Truths are always the last Resort of the Understanding, beyond which it aims not to advance, but posits its Notions in perfect Security, as having now reached the Spring and Fountain of all Science and Certainty.

CH A P. II.

Of the several Kinds of Reasoning, and first of that by which we determine the Genera and Species of Things.

WE have endeavoured in the foregoing Chapter to give as distinct a Notion as possible of Reasoning, and of the Manner in which it is conducted. Let us now enquire a little into the Difficulties made by this Faculty, and what those Ends are, which are principally in view in the Exercise of it. All the Operations of human Reason may in the general be reduced to two: 1. To rank Things under those universal Ideas to which they truly belong; and, 2. To ascribe to them such several Attributes and Properties in consequence of that Relation.

II. FIRST

*The first Kind
regards the
Genera and
Species of
Things.*

II. FIRST then I say, that one great Aim of human Reason is, to determine the Genera and Species of Things. We have seen in the first Part of this Treatise, how the Mind proceeds in framing general Ideas. We have also seen in the second Part, how by means of these general Ideas, we come by universal Propositions. Now as in these universal Propositions, we affirm some Property of a Genus or Species, it is plain that we cannot apply this Property to particular Objects, till we have first determined, whether they are comprehended under that general Idea, of which the Property is affirmed. Thus there are certain Properties belonging to all *even* Numbers, which nevertheless cannot be applied to any particular Number, until we have first discovered it to be of the Species expressed by that natural Name. Hence Reasoning begins with referring Things to their several Divisions and Classes in the Scale of our Ideas; and as these Divisions are all distinguished by particular Names, we hereby learn to apply the Terms expressing general Conceptions, to such particular Objects, as come under our immediate Consideration.

*The Steps by
which we ar-
rive at Con-
clusions of this
Sort.*

III. Now in order to arrive at these Conclusions, by which the several Objects of Perception are brought under general Names, two Things are manifestly necessary. First, that we take a View of the Idea itself denoted by that general Name, and carefully attend to the distinguishing Marks which serve to characterize it. Secondly, that we compare this Idea with the Object under Consideration, observing diligently wherein they agree or differ. If the Idea is found to correspond with the particular Object, we then without Hesitation apply the general Name; but if no such Correspondence intervenes, the Conclusion must necessarily take a contrary Turn. Let us for instance take the Number *Eight*, and consider by what Steps we are led to pronounce it an *even* Number. First then we call to mind the Idea signified by the Expression *an even Number*, viz. that it is *a Number divisible into equal Parts*. We then compare this Idea with the Number *Eight*, and finding them manifestly to agree, see at once the Necessity of admitting the Conclusion. These several Judgments therefore, transferred into Language, and reduced to the Form of a Syllogism, appear thus:

Every Number that may be divided into two equal Parts is an EVEN Number.

The Number EIGHT may be divided into two equal Parts.

Therefore the Number EIGHT is an EVEN Number.

IV.

IV. I HAVE made choice of this Example; not so much for the Sake of the Conclusion, which is obvious enough; and might have been obtained without all that Parade of Words; but chiefly because it is of easy Comprehension, and serves at the same time distinctly to exhibit the Form of Reasoning, by which the Understanding conducts itself in all Instances of this kind. And here it may be observed, that where the general Idea, to which particular Objects are referred, is very familiar to the Mind, and frequently in view; this Reference, and the Application of the general Name, seem to be made without any Apparatus of Reasoning. When we see a Horse in the Fields, or a Dog in the Street, we readily apply the Name of the Species; Habit, and a familiar Acquaintance with the general Idea, suggesting it instantaneously to the Mind. We are not however to imagine on this Account, that the Understanding departs from the usual Rules of just Thinking. A frequent Repetition of Acts begets a Habit; and Habits are attended with a certain Promptness of Execution, that prevents our observing the several Steps and Gradations, by which any Course of Action is accomplished. But in other Instances, where we judge not by pre-contracted Habits, as when the general Idea is very complex, or less familiar to the Mind; we always proceed according to the Form of Reasoning established above. A Goldsmith for instance, who is in doubt as to any Piece of Metal, whether it be of the Species called Gold; first examines its Properties, and then comparing them with the general Idea signified by that Name, if he finds a perfect Correspondence, no longer hesitates under what Class of Metals to rank it. Now what is this, but following Step by Step those Rules of Reasoning, which we have before laid down as the Standards, by which to regulate our Thoughts in all Conclusions of this kind?

*These Steps
always fol-
lowed, tho' in
familiar Cases
we do not al-
ways attend
to them.*

V. NOR let be imagined, that our Researches here, because in Appearance bounded to the imposing of general Names upon particular Objects, are therefore trivial and of little Consequence. Some of the most considerable Debates among Mankind, and such too as nearly regard their Lives, Interest, and Happiness, turn wholly upon this Article. Is it not the chief Employment of our several Courts of Judicature, to determine in particular Instances, what is Law, Justice, and Equity? Of what Importance is it in many Cases, to decide aright, whether an Action shall be termed Murder or Manslaughter? We see then, that no less than the Lives and Fortunes of Men, depend often

*The great Im-
portance of this
Branch of
Reasoning.*

upon these Decisions. The Reason is plain. Actions when once referred to a general Idea, draw after them all that may be affirmed of that Idea; insomuch that the determining the Species of Actions, is all one with determining what Proportion of Praise or Dispraise, Commendation or Blame, &c. ought to follow them. For as it is allowed that Murder deserves Death, by bringing any particular Action under the Head of Murder, we of course decide the Punishment due to it.

And the exact Observation of it practised by Mathematicians.

VI. BUT the great Importance of this Branch of Reasoning, and the Necessity of Care and Circumspection, in referring particular Objects to general Ideas, is still farther evident from the Practice of the Mathematicians. Every one who has read *Euclid* knows, that he frequently requires us to draw Lines thro' certain Points, and according to such and such Directions. The Figures thence resulting are often Squares, Parallelograms, or Rectangles. Yet *Euclid* never supposes this from their bare Appearance, but always demonstrates it upon the strictest Principles of Geometry. Nor is the Method he takes in any thing different from that described above. Thus for instance, having defined a Square to be a Figure bounded by four equal Sides, joined together at right Angles; when such a Figure arises in any Construction previous to the Demonstration of a Proposition, yet he never calls it by that Name, until he has shewn that its Sides are equal, and all its Angles right ones. Now this is apparently the same Form of Reasoning we have before exhibited, in proving *Eight* to be an even Number; as will be evident to any one who reduces it into a regular Syllogism. I shall only add, that when *Euclid* has thus determined the Species of any Figure, he is then and not before at liberty to ascribe to it all the Properties already demonstrated of that Figure, and thereby render it subservient to the future Course of his Reasoning.

VII. HAVING thus sufficiently explained the Rules, by which we are to conduct ourselves, in ranking particular Objects under general Ideas, and shewn their Conformity to the Practice and Manner of the Mathematicians; it remains only to observe, that the true Way of rendering this Part of Knowledge both easy and certain, is; by habituating ourselves to clear and determinate Ideas, and keeping them steadily annexed to their respective Names. For as all our Aim is, to apply general Words aright; if these Words stand for invariable Ideas, that are perfectly known to the Mind, and can be readily distinguished

Fixed and invariable Ideas with a steady Application of Names, renders this Part of Knowledge both easy and certain.

upon

1p. II. Of REASONING.

115

On Occasion, there will be little Danger of Mistake or Error in our Reasonings. Let us suppose that by examining Objects, and carrying our Attention successively from one to another, we have acquainted ourselves with the several particulars observable in it. If among these we find such as constitute some general Idea, framed and settled beforehand by Understanding, and distinguished by a particular Name; Resemblance thus known and perceived, necessarily determines the Species of the Object, and thereby gives it a right to Name by which that Species is called. Thus four equal Lines, joined together at right Angles, make up the Notion of a Square. As this is a fixed and invariable Idea, without which a general Name cannot be applied, we never call any particular Figure a *Square*, until it appears to have these several Conditions; and contrarily, wherever a Figure is found with

these Conditions, it necessarily takes the Name of a *Square*: the same will be found to hold in all our other Reasonings of kind; where nothing can create any Difficulty but the want of settled Ideas. If for instance we have not determined in ourselves, the precise Notion denoted by the Word *slaughter*; it will be impossible for us to decide, whether a particular Action ought to bear that Name: because how nicely we examine the Action itself, yet being Strangers to the general Idea with which it is to be compared, we are wholly unable to judge of their Agreement or Disagreement. If we take care to remove this Obstacle, and distinctly settle the two Ideas under Consideration, all Difficulties vanish, the Resolution becomes both easy and certain.

III. Thus we see, of what Importance it is, towards the Improvement and Certainty of human Knowledge, that we accustom ourselves to clear and determinate Ideas, and a steady Application of them. Nor is this so easy a Task as some may perhaps be apt to imagine; it requiring both a comprehensive Understanding, and great Command of Attention, to settle the precise Bounds of our Ideas,

By such a Conduct, Certainty and Determination might be introduced into the Parts of Knowledge as well as Mathematics.

as they grow to be very complex, and include a Multitude of particulars. Nay and after these Limits are duly fixed, there is a certain Quickness of Thought and Extent of Mind required, towards keeping the several Parts in View, that in comparing our Ideas one with another, none of them may be overlooked. Yet ought not these Difficulties to discourage us; great as they are not unsurmountable, and the Advantages arising from Success will amply recompense our Toil. The Certainty and easy Application of Mathematical Knowledge is

wholly owing to the exact Observance of this Rule. And I am apt to imagine, that if we were to employ the same Care about all our other Ideas, as Mathematicians have done about those of Number and Magnitude, by forming them into exact Combinations, and distinguishing these Combinations by particular Names, in order to keep them steady and invariable; we should soon have it in our Power, to introduce Certainty and Demonstration into other Parts of human Knowledge.

C H A P. III.

Of Reasoning as it regards the Powers and Properties of Things, and the Relations of our general Ideas.

The Distinction of Reasoning as it regards the Sciences, and as it concerns common life.

I. **W**E come now to the second great End which Men have in view in their Reasonings, namely; the discovering and ascribing to things their several Attributes and Properties. And here it will be necessary to distinguish between Reasoning as it regards the Sciences, and as it concerns common Life. In the Sciences, our Reason is employed chiefly about universal Truths, it being by them alone, that the Bounds of human Knowledge are enlarged. Hence the Division of things into various Classes, called otherwise Genera and Species. For these universal Ideas, being set up as the Representatives of many particular things, whatever is affirmed of them, may be also affirmed of all the Individuals to which they belong. *Murder* for instance is a general Idea, representing a certain Species of human Actions. Reason tells us that the Punishment due to it is *Death*. Hence every particular Action coming under the Notion of *Murder*, has the Punishment of *Death* allotted to it. Here then we apply the general Truth to some obvious Instance, and this is what properly constitutes the Reasoning of common Life. For Men, in their ordinary Transactions and Intercourse one with another, have for the most part to do only with particular Objects. Our Friends and Relations, their Characters and Behaviour, the Constitution of the several Bodies that surround us, and the Uses to which they may be applied, are what chiefly engage our Attention. In all these we reason about particular things; and the whole Result of our Reasoning is, the applying the general Truths of the Sciences, in the ordinary Transactions of human Life. When we see a Viper we avoid it.

Where-

Where-ever we have Occasion for the forcible Action of Water, to move a Body that makes considerable Resistance, we take care to convey it in such a manner, that it shall fall upon the Object with Impetuosity. Now all this happens, in consequence of our familiar and ready Application of these two general Truths. *The Bite of a Viper is mortal. Water falling upon a Body with Impetuosity, acts very forcibly towards setting it in Motion.* In like manner, if we set ourselves to consider any particular Character, in order to determine the Share of Praise or Dispraise that belongs to it, our great Concern is, to ascertain exactly the Proportion of Virtue and Vice, The Reason is obvious. A just Determination in all Cases of this kind, depends entirely upon an Application of these general Maxims of Morality : *Virtuous Actions deserve Praise. Vicious Actions deserve Blame.*

II. HENCE it appears, that Reasoning as it regards common Life, is no more than the ascribing the general Properties of things, to those several Objects with which we are more immediately concerned, according as they are found to be of that particular Division or Class, to which the Properties belong. The Steps then by which we proceed are manifestly these. First, we refer the Object under Consideration to some general Idea or Class of Things. We then recollect the several Attributes of that general Idea. And lastly, ascribe all those Attributes to the present Object. Thus in considering the Character of *Sempronius*, if we find it to be of the kind called *Virtuous*; when we at the same time reflect, that a *virtuous* Character is deserving of Esteem, it naturally and obviously follows, that *Sempronius* is so too. These Thoughts put into a *Syllogism*, in order to exhibit the Form of Reasoning here required, run thus.

The Steps by which we proceed in the Reasoning of common Life.

Every virtuous Man is worthy of Esteem.

SEMPRONIUS is a virtuous Man :

Therefore SEMPRONIUS is worthy of Esteem.

III. By this *Syllogism* it appears, that before we affirm any thing of a particular Object, that Object must be referred to some general Idea. *Sempronius* is pronounced worthy of Esteem, only in consequence of his being a virtuous Man, or coming under that general Notion. Hence we see the necessary Connection of the various Parts of Reasoning, and the Dependence they have one upon another. The determining the Genera and Species of Things, is as we have said, one Exercise of human Reason; and here we find,

The Connection and Dependence of the two grand Branches of Reasoning one upon another.

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Chap. III. Of REASONING.

117

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The Connection and Dependence of the two grand Branches of Reasoning one upon another.

that this Exercise is the first in order, and previous to the other, which consists in ascribing to them their Powers, Properties, and Relations. But when we have taken this previous Step, and brought particular Objects under general Names; as the Properties we ascribe to them are no other than those of the general Idea, it is plain, that in order to a successful Progress in this Part of Knowledge, we must thoroughly acquaint ourselves with the several Relations and Attributes of these our general Ideas. When this is done, the other Part will be easy, and require scarce any Labour of Thought, as being no more than an Application of the general Form of Reasoning represented in the foregoing *Syllogism*. Now as we have already sufficiently shewn, how we are to proceed in determining the Genera and Species of things, which as we have said is the previous Step to this second Branch of human Knowledge; all that is farther wanting towards a due Explanation of it is, to offer some Considerations, as to the manner of investigating the general Relations of our Ideas. This is the highest Exercise of the Powers of the Understanding, and that by means whereof we arrive at the Discovery of universal Truths; inasmuch that our Deductions in this Way, constitute that particular Species of Reasoning, which we have before said regards principally the Sciences.

*Two Things
required to
make a good
Reasoner.*

IV. BUT that we may conduct our Thoughts with some Order and Method, we shall begin with observing, that the Relations of our general Ideas are of two Kinds. Either such as immediately discover themselves, upon comparing the Ideas one with another; or such, as being more remote and distant, require Art and Contrivance to bring them into view. The Relations of the first kind, furnish us with intuitive and self-evident Truths: those of the second, are traced by Reasoning, and a due Application of intermediate Ideas. It is of this last kind that we are to speak here, having dispatched what was necessary with regard to the other in the second Part. As therefore in tracing the more distant Relations of Things, we must always have recourse to intervening Ideas, and are more or less successful in our Researches, according to our Acquaintance with these Ideas, and Ability of applying them; it is evident, that to make a good Reasoner, two things are principally required. *First*, an extensive Knowledge of those intermediate Ideas, by means of which things may be compared one with another. *Secondly*, the Skill and Talent of applying them happily, in all particular Instances that come under Consideration.

II. Of REASONING.

119.

FIRST I say, that in order to our successful in Reasoning, we must have an extensive Knowledge of those intermediate Ideas by which things may be compared one with

First, an extensive Knowledge of intermediate Ideas,

For as it is not every Idea that will be the Purpose of our Enquiries, but such only as are peculiar to the Objects about which we reason, so as by a Connection with them, to furnish evident and known Truths; it is more apparent, than that the greater Variety of Objects we can call into view, the more likely we are to find among them, that will help us to the Truths required. And indeed it is found to hold in Experience, in proportion as we enlarge our Views of Things, and are acquainted with a Multitude of different Objects, the greater Faculty gathers Strength. For by extending our Knowledge, the Mind acquires a certain Force and Momentum, as being accustomed to examine the several Applications of its Ideas, and observe what Light they cast one upon the other.

AND this I take to be the Reason, that in which a Man excels remarkably in any one Branch of Learning, it is necessary to have at least a general Acquaintance with the whole Circle of Arts and Sciences.

To excel in any one Branch of Learning, we must be acquainted with the whole Circle of Arts and Sciences.

The Truth of it is, all the various Branches of human Knowledge, are very nearly connected among themselves, and in innumerable Instances, serve to illustrate and set off each other. It is not to be denied, that by an obstinate Application to one Branch of Study, a Man may make considerable Progress, and acquire some Degree of Eminence in it; yet this will be always narrow and contracted, and he will want that masterly Discernment, which not only enables us to improve our Discoveries with Ease, but also in laying them out to others, to spread a certain Brightness around them.

It may not however here be understood to mean, that a general Knowledge alone is sufficient for all the Purposes of Reasoning.

I only recommend it as proper to give the Mind a general Sagacity and Quickness, and qualify it for judging in the ordinary Occurrences of Life. But when our Reasoning regards a particular Science, it is farther necessary, more nearly to acquaint ourselves with whatever relates to that Science. A general Knowledge is a good Preparation, which enables us to proceed with Ease and Expedition in any Branch of Learning we apply to. But then in the most difficult and intricate Questions of any Science, we are by no

means qualified to reason with Advantage, until we have perfectly mastered the Science to which they belong; it being hence chiefly, that we are furnished with those intermediate Ideas, which lead to a just and successful Solution.

VIII. AND here as it comes so naturally in my Way, I cannot avoid taking notice of an Observation, that is frequently to be met with, and seems to carry in it at first, something very strange and unaccountable. It is in short this; that *Mathematicians*, even such as are universally allowed to excel in their own Profession, and to have discovered themselves perfect Masters in the Art of Reasoning, have not yet been always happy in treating upon other Subjects; but rather fallen short, not only of what might naturally have been expected from them, but of many Writers much less exercised in the Rules of Argumentation. This will not appear so very extraordinary, if we reflect on what has been hinted above. *Mathematics* is an engaging Study, and Men who apply themselves that Way, so wholly plunge into it, that they are for the most part but little acquainted with other Branches of Knowledge. When therefore they quit their favourite Subject, and enter upon others that are in a manner new and strange to them, no wonder if they find their Invention at a stand. Because however perfect they may be in the Art of Reasoning, yet wanting here those intermediate Ideas, which are necessary to furnish out a due Train of Propositions, all their Skill and Ability fails them. For bare Knowledge of the Rules is not sufficient. We must farther have Materials whereunto to apply them. And when these are once obtained, then it is that an able Reasoner discovers his Superiority, by the just Choice he makes, and a certain masterly Disposition, that in every Step of the Procedure, carries Evidence and Conviction along with it. And hence it is, that such *Mathematicians* as have of late Years applied themselves to other Sciences, and not contented with a superficial Knowledge, endeavoured to reach their inmost Recesses; such *Mathematicians*, I say, have by mere Strength of Mind, and a happy Application of *Geometrical* Reasoning, carried their Discoveries far beyond, what was heretofore judged the utmost Limits of human Knowledge. This is a Truth abundantly known, to all who are acquainted with the late wonderful Improvements in Natural Philosophy.

Secondly, the Skill of applying inter-

VIII. I COME now to the second thing required, in order to a successful Progress in Reasoning, namely; the Skill and Talent of applying intermediate

Chap. III. Of REASONING.

121

mediate Ideas happily, in all particular Instances that come under Consideration. And here I shall not take up much time in laying down Rules and Precepts, because I am apt to think they would do but little Service. Use and Experience are the best Instructors in the present Case: and whatever Logicians may boast, of being able to form perfect Reasoners by Book and Rule, yet we find by Experience, that the Study of their Precepts, does not always add any great Degree of Strength to the Understanding. In short, 'tis the Habit alone of Reasoning, that makes a Reasoner. And therefore the true Way to acquire this Talent is, by being much conversant in those Sciences, where the Art of Reasoning is allowed to reign in the greatest Perfection. Hence it was that the Ancients, who so well understood the Manner of forming the Mind, always began with *Mathematics*, as the Foundation of their Philosophical Studies. Here the Understanding is by Degrees habituated to Truth, contracts insensibly a certain Fondness for it, and learns never to yield its Assent to any Proposition, but where the Evidence is sufficient to produce full Conviction. For this Reason *Plato* has called Mathematical Demonstrations the *Cathartics* or Purgatives of the Soul, as being the proper Means to cleanse it from Error, and restore that natural Exercise of its Faculties, in which just Thinking consists. And indeed I believe it will be readily allowed, that no Science furnishes so many Instances, of a happy Choice of intermediate Ideas, and a dexterous Application of them, for the Discovery of Truth, and Enlargement of Knowledge.

*mediate Ideas
happily in
particular In-
stances.*

IX. IF therefore we would form our Minds to a Habit of Reasoning closely and in train, we cannot take any more certain Method, than the exercising ourselves in Mathematical Demonstrations, so as to contract a kind of Familiarity with them. "Not that we look upon it as necessary, (to use the Words of the great Mr. Locke) that all Men should be deep Mathematicians, but that, having got the Way of Reasoning which that Study necessarily brings the Mind to, they may be able to transfer it to other Parts of Knowledge, as they shall have Occasion. For in all sorts of Reasoning, every single Argument should be managed as a Mathematical Demonstration, the Connection and Dependence of Ideas should be followed, till the Mind is brought to the Source on which it bottoms, and can trace the Coherence through the whole Train of Proofs. It is in the general observable, that the Faculties of our Souls are improved
" and

*The Study of
Mathematical
Demonstra-
tions of great
Avail in this
Respect.*

“ and made useful to us, just after the same manner, as our Bodies are. Would you have a Man write or paint, dance or fence well, or perform any other manual Operation, dexterously and with Ease? Let him have ever so much Vigour and Activity, Suppleness and Address naturally, yet nobody expects this from him unless he has been used to it, and has employed Time and Pains in fashioning and forming his Hand, or outward Parts, to these Motions. Just so it is in the Mind; would you have a Man reason well, you must use him to it betimes, exercise his Mind in observing the Connection of Ideas, and following them in train. Nothing does this better than Mathematics, which therefore I think should be taught all those, who have the Time and Opportunity, not so much to make them Mathematicians, as to make them reasonable Creatures; for though we all call ourselves so, because we are born to it, if we please; yet we may truly say, Nature gives us but the Seeds of it. We are born to be, if we please, rational Creatures; but 'tis Use and Exercise only that makes us so, and we are indeed so, no farther than Industry and Application has carried us.”

Conduct of the Understanding.

*As all of
such Authors
on other Sub-
jects, as are
distinguished
for Strength
and Justness
of Reasoning.*

X. BUT although the Study of Mathematics, be of all others the most useful, to form the Mind, and give it an early relish of Truth, yet ought not other Parts of Philosophy to be neglected. For there also we meet with many Opportunities of exercising the Powers of the Understanding; and the Variety of Subjects naturally leads us, to observe all those different Turns of Thinking, that are peculiarly adapted to the several Ideas we examine, and the Truths we search after. A Mind thus trained, acquires a certain Mastery over its own Thoughts, insomuch that it can range and model them at pleasure, and call such into view, as best suit its present Designs. Now in this the whole Art of Reasoning consists, from among a great Variety of different Ideas, to single out those that are most proper for the Business in hand, and to lay them together in such Order, that from plain and easy Beginnings, by gentle Degrees, and a continued Train of evident Truths, we may be insensibly led on to such Discoveries, as at our first setting out appeared beyond the Reach of human Understanding. For this Purpose, besides the Study of Mathematics before recommended, we ought to apply ourselves diligently to the reading of such Authors, as have distinguished themselves for Strength of Reasoning, and a just and accurate Manner of Thinking. For it is observable, that a

Mind

Chap. IV. Of REASONING.

123

Mind exercised and seasoned to Truth, seldom rests satisfied in a bare Contemplation of the Arguments offered by others, but will be frequently assaying its own Strength, and pursuing its Discoveries upon the Plan it is most accustomed to. Thus we insensibly contract a Habit, of tracing Truth from one Stage to another, and of investigating those general Relations and Properties, which we afterwards ascribe to particular Things, according as we find them comprehended under the abstract Ideas, to which the Properties belong. And thus having particularly shewn, how we are to distribute the several Objects of Nature under general Ideas, what Properties we are to ascribe to them in consequence of that Distribution, and how to trace and investigate the Properties themselves; I think I have sufficiently explained all that is necessary towards a due Conception of Reasoning, and shall therefore here conclude this Chapter.

C H A P. IV.

Of the Forms of Syllogisms.

I. **H**ITHERTO we have contented ourselves with a general Notion of Syllogisms, and of the Parts of which they consist. It is now time to enter a little more particularly into the Subject, to examine their various Forms, and lay open the Rules of Argumentation proper to each. In the Syllogisms mentioned in the foregoing Chapters, we may observe, that the *middle Term* is the Subject of the *Major* Proposition, and the Predicate of the *Minor*. This Disposition, though the most natural and obvious, is not however necessary; it frequently happening, that the *middle Term* is the Subject in both the Premises, or the Predicate in both; and sometimes, directly contrary to its Disposition in the foregoing Chapters, the Predicate in the *Major*, and the Subject in the *Minor*. Hence the Distinction of Syllogisms into various Kinds, called *Figures* by Logicians. For *Figure*, according to their Use of the Word, is nothing else, but the Order and Disposition of the *middle Term* in any Syllogism. And as this Disposition, as we see fourfold, so the Figures of Syllogisms thence arising, are four in Number. When the *middle Term* is the Subject of the *Major* Proposition, and the Predicate of the *Minor*, we have what is called the *first Figure*. If on the other hand, it is the Predicate of both

*Tab. Figures
of Syllogisms.*

both the Premises, the Syllogism is said to be in the *second Figure*. Again in the *third Figure*, the *middle Term* is the Subject of the two Premises. And lastly, by making it the Predicate of the *Major*, and Subject of the *Minor*, we obtain Syllogisms in the *fourth Figure*.

The Modes of Syllogisms.

II. BUT besides this fourfold Distinction of Syllogisms, there is also a farther Subdivision of them in every Figure, arising from the *Quantity* and *Quality* as they are called of the Propositions. By *Quantity* we mean the Consideration of Propositions as universal or particular, by *Quality* as affirmative or negative. Now as in all the several Dispositions of the *middle Term*, the Propositions of which a Syllogism consists, may be either universal or particular, affirmative or negative; the due Determination of these, and so putting them together, as the Laws of Argumentation require, constitute what Logicians call the *Moods* of Syllogism. Of these *Moods* there are a determinate Number to every Figure, including all the possible Ways, in which Propositions differing in *Quantity* or *Quality* can be combined, according to any Disposition of the *middle Term*, in order to arrive at a just Conclusion. The Shortness of the present Work, will not allow of my entering into a more particular Description, of these several Distinctions and Divisions. I shall therefore content myself, with referring the Reader to the *Port-Royal Art of Thinking*, where he will find the *Moods* and *Figures* of Syllogisms distinctly explained, and the Rules proper to each very neatly demonstrated.

Foundation of the other Division of Syllogisms.

III. THE Division of Syllogisms, according to Mood and Figure, respects those especially, which are known by the Name of plain simple Syllogisms; that is, which are bounded to three Propositions, all simple, and where the Extremes and middle Term are connected, according to the Rules laid down above. But as the Mind is not tied down to any one precise Form of Reasoning, but sometimes makes use of more, sometimes of fewer Premises, and often takes in compound and conditional Propositions, it may not be amiss to take notice of the different Forms derived from this Source, and explain the Rules by which the Mind conducts itself in the Use of them.

Conditional Syllogisms.

IV. WHEN in any Syllogism, the *Major* is a conditional Proposition, the Syllogism itself is termed *Conditional*. Thus:

*If there is a God, he ought to be worshiped.
But there is a God;*

Therefore

Therefore he ought to be worshiped.

In this Example, the *Major* or first Proposition, is we see conditional, and therefore the Syllogism itself is also of the kind, called by that Name. And here we are to observe, that all conditional Propositions are made of two distinct Parts: one expressing the Condition upon which the Predicate agrees or disagrees with the Subject, as in this now before us, *if there is a God*; the other joining or disjoining the said Predicate and Subject, as here, *he ought to be worshiped*. The first of these Parts, or that which implies the Condition, is called the *Antecedent*; the second, where we join or disjoin the Predicate and Subject, has the Name of the *Consequent*.

V. THESE Things explained, we are farther to observe; that in all Propositions of this kind, supposing them to be exact in point of Form, the Relation between the Antecedent and Consequent, must ever be true and real; that is, the Antecedent must always contain some certain and genuine Condition, which necessarily implies the Consequent: for otherwise, the Proposition itself will be false, and therefore ought not to be admitted into our Reasonings. Hence it follows, that when any conditional Proposition is assumed, if we admit the Antecedent of that Proposition, we must at the same time necessarily admit the Consequent; but if we reject the Consequent, we are in like manner bound to reject the Antecedent. For as the Antecedent always expresses some Condition, which necessarily implies the Truth of the Consequent; by admitting the Antecedent we allow of that Condition, and therefore ought also to admit the Consequent. In like manner, if it appears that the Consequent ought to be rejected, the Antecedent evidently must be so too; because, as was just now demonstrated, the admitting of the Antecedent, would necessarily imply the Admission also of the Consequent.

Ground of Illustration in conditional Syllogisms.

VI. FROM what has been said it appears, that there are two Ways of arguing in *hypothetical* Syllogisms, which lead to a certain and unavoidable Conclusion. For as the *Major* is always a conditional Proposition, consisting of an Antecedent and a Consequent; if the *Minor* admits the Antecedent, it is plain that the Conclusion must admit the Consequent. This is called arguing from the Admission of the Antecedent to the Admission of the Consequent, and constitutes that Mood or Species of *hypothetical* Syllogisms, which is distinguished in the Schools by the Name of the *Modus ponens*, inasmuch

The two Modes of conditional Syllogisms.

much as by it, the whole conditional Proposition, both Antecedent and Consequent, is established. Thus :

If God is infinitely wise, and acts with perfect Freedom, he does nothing but what is best.

*But God is infinitely wise, and acts with perfect Freedom :
Therefore he does nothing but what is best.*

Here we see the Antecedent or first Part of the conditional Proposition is established in the *Minor*, and the Consequent or second Part in the Conclusion ; whence the Syllogism itself is an Example of the *Modus ponens*. But if now we on the contrary suppose, that the *Minor* rejects the Consequent, then it is apparent, that the Conclusion must also reject the Antecedent. In this Case we are said to argue from the Removal of the Consequent, to the Removal of the Antecedent, and the particular Mood or Species of Syllogisms thence arising, is called by Logicians the *Modus tollens* ; because in it, both Antecedent and Consequent, are rejected or taken away, as appears by the following Example.

If God were not a Being of infinite Goodness, neither would he consult the Happiness of his Creatures.

*But God does consult the Happiness of his Creatures :
Therefore he is a Being of infinite Goodness.*

*They include
all the legiti-
mate Ways
of Arguing.*

VII. THESE two Species take in the whole Class of conditional Syllogisms, and include all the possible Ways of arguing that lead to a legitimate Conclusion ; because we cannot here proceed by a contrary Process of Reasoning, that is, from the Removal of the Antecedent to the Removal of the Consequent, or from the establishing of the Consequent to the establishing of the Antecedent. For altho' the Antecedent always expresses some real Condition, which once admitted necessarily implies the Consequent, yet it does not follow that there is therefore no other Condition ; and if so, then after removing the Antecedent, the Consequent may still hold, because of some other Determination that infers it. When we say : *If a Stone is exposed some time to the Rays of the Sun, it will contract a certain Degree of Heat* ; the Proposition is certainly true, and admitting the Antecedent, we must also admit the Consequent. But as there are other Ways by which a Stone may gather Heat, it will not follow, from the ceasing of the before-mentioned Condition, that therefore the Consequent cannot take place. In other Words, we cannot argue : *But the Stone has not been exposed to the Rays of the Sun ; therefore neither has it any Degree of Heat* : inasmuch as there are a great many other Ways, by which Heat might have been communicated

to it. And if we cannot argue from the Removal of the Antecedent to the Removal of the Consequent, no more can we from the Admission of the Consequent to the Admission of the Antecedent. Because as the Consequent may flow from a great Variety of different Suppositions, the allowing of it does not determine the precise Supposition, but only that some one of them must take place. Thus in the foregoing Proposition, *If a Stone is exposed some time to the Rays of the Sun, it will contract a certain Degree of Heat*: Admitting the Consequent, viz. *that it has contracted a certain Degree of Heat*, we are not therefore bound to admit the Antecedent, *that it has been some time exposed to the Rays of the Sun*; because there are many other Causes whence that Heat may have proceeded. These two Ways of arguing therefore, hold not in conditional Syllogisms. Indeed, where the Antecedent expresses the only Condition on which the Consequent takes place, there they may be applied with Safety; because where-ever that Condition is not, we are sure that neither can the Consequent be, and so may argue from the Removal of the one to the Removal of the other; as on the contrary, where-ever the Consequent is not, it is certain that the Condition must also take place; and therefore, that by establishing the Consequent, we at the same time establish the Antecedent. But as this is a very particular Case, and that happens but seldom, it cannot be extended to a general Rule, and therefore affords not any steady and universal Ground of Reasoning upon the two foregoing Suppositions.

As from the *Major's* being a conditional Proposition, we obtain the Species of conditional Syllogisms; so where it is a disjunctive Proposition the Syllogism to which it belongs is also called *Disjunctive*, as in the following Example:

*The Manner
of arguing
in disjunctive
Syllogisms.*

The World is either self-existent, or the Work of some finite, or of some infinite Being.

But it is not self-existent, nor the Work of a finite Being:
Therefore it is the Work of an infinite Being.

Now a disjunctive Proposition is that, where of several Predicates, we affirm one necessarily to belong to the Subject, to the Exclusion of all the rest, but leave that particular one undetermined. Hence it follows, that as soon as we determine the particular Predicate, all the rest are of course to be rejected; or if we reject all the Predicates but one, that one necessarily takes place. When therefore in a *disjunctive* Syllogism, the several Predicates are enumerated in the *Major*; if the *Minor* establishes any one of these Predicates, the Conclusion

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clusion ought to remove all the rest; or if in the *Minor*, all the Predicates but one are removed, the Conclusion must necessarily establish that one. Thus in the *disjunctive* Syllogism given above, the *Major* affirms one of three Predicates to belong to the Earth, viz. *Self-existence*, or that it is *the Work of a finite*, or that it is *the Work of an infinite Being*. Two of these Predicates are removed in the *Minor*, viz. *Self-existence*, and *the Work of a finite Being*. Hence the Conclusion necessarily ascribes to it the third Predicate, and affirms that it is *the Work of an infinite Being*. If now we give the Syllogism another Turn, inasmuch that the *Minor* may establish one of the Predicates, by affirming the Earth to be *the Production of an infinite Being*; then the Conclusion must remove the other two, asserting it to be neither *self-existent*, nor *the Work of a finite Being*. These are the Forms of Reasoning in these species of Syllogisms, the Justness of which appears at first Sight; and that there can be no other, is evident from the very Nature of a disjunctive Proposition.

IX. IN the several Kinds of Syllogisms hitherto mentioned, we may observe, that the Parts are compleat; that is, the three Propositions of which they consist, are represented in Form. But it often happens, that some one of the Premises is not only an evident Truth, but also familiar and in the Minds of all Men; in which Case it is usually omitted, whereby we have an imperfect Syllogism, that seems to be made up of only two Propositions: Should we for instance argue in this manner:

Every Man is mortal:

Therefore every King is mortal.

The Syllogism appears to be imperfect, as consisting but of two Propositions. Yet it is really compleat, only the *Minor* [*Every King is a Man*] is omitted, and left to the Reader to supply, as being a Proposition so familiar and evident, that it cannot escape him.

X. THESE seemingly imperfect Syllogisms are called *Enthymemes*, and occur very frequently in Reasoning, especially where it makes a Part of common Conversation. Nay there is a particular Elegance in them, because not displaying the Argument in all its Parts, they leave somewhat to the Exercise and Invention of the Mind. By this Means we are put upon exerting ourselves, and seem to share in the Discovery of what is proposed to us. Now this is the great Secret of fine Writing, so to frame and put together our Thoughts, as to give full Play to the Reader's Imagination, and draw him insensibly into our very Views and Course

Reasoning. This gives a Pleasure not unlike to that Author himself feels in composing. It besides shortens, and adds a certain Force and Liveliness to ~~words~~, when the Words in which they are conveyed, ~~the~~ natural Quickness of the Mind in its Operations, ~~the~~ Expression is left to exhibit a whole Train of

if there is another Species of Reasoning Propositions, which seems to be common, and where we admit the Conclusion supposing any tacit or suppressed in the Mind, from which it follows syllogistically. *Ground of Reasoning in immediate Consequences.* In the Propositions, where the Connection is the Admission of the one, necessarily and at the first is, the Admission also of the other. For if it so falls the Proposition on which the other depends is self-evident content ourselves with barely affirming it, and other by a direct Conclusion. Thus by admitting a Proposition, we are forced also to admit of all the Propositions comprehended under it, this being the Proposition that constitutes a Proposition universal. If then a Proposition chances to be self-evident, the particulars follow of course, without any farther Train of

Whoever allows for instance, *that Things equal to the same Thing are equal to one another*, must at the same time allow, *that two Triangles, each equal to a Square which is three Inches, are also equal between themselves.* It is evident therefore, *that Things equal to one and the same Thing are equal to one another:*

Therefore these two Triangles, each equal to the Square of a Side of three Inches, are equal between themselves, is in its Kind, and contains all that is necessary to the most just and legitimate Conclusion. For the first or universal Proposition is self-evident, and therefore requires no farther Proof. And as the Truth of the Particular is inseparably connected with that of the Universal, it follows from it by an unavoidable Consequence.

Now in all Cases of this kind, where Propositions are deduced one from another, on the supposition of a known and evident Connection, we may reason by *immediate Consequence.* Such a Mode of Propositions, manifest at first sight, and forced upon the Mind, frequently occurs in Reasoning. We have explained at some length, the several Suppositions

All reducible to Syllogisms of some one Form or other.

tions upon which it takes place, and allow of all *immediate Consequences* that follow in Conformity to them. It is however observable, that these Arguments, tho' seemingly complete, because the Conclusion follows necessarily from the single Proposition that goes before, may yet be considered as real *Enthymemes*, whose *Major*, which is a conditional Proposition, is wanting. The Syllogism but just mentioned, when represented according to this View, will run as follows :

If Things equal to one and the same Thing are equal to one another ; these two Triangles, each equal to a Square whose Side is three Inches, are also equal between themselves.

But Things equal to one and the same Thing, are equal to one another :

Therefore also these Triangles, &c. are equal between themselves.

This Observation will be found to hold in all *immediate Consequences* whatsoever, inasmuch that they are in Fact no more than *Enthymemes* of hypothetical Syllogisms. But then it is particular to them, that the Ground on which the Conclusion rests, namely its Coherence with the *Minor*, is of itself apparent, and seen immediately to flow from the Rules and Reasons of Logick. As it is therefore entirely unnecessary to express a self-evident Connection, the *Major*, whose Office that is, is constantly omitted ; nay and seems so very little needful to enforce the Conclusion, as to be accounted commonly no Part of the Argument at all. It must indeed be owned, that the foregoing *immediate Consequence*, might have been reduced to a *simple*, as well as an *hypothetical Syllogism*. This will be evident to any one who gives himself the Trouble to make the Experiment. But it is not my Design to enter farther into these Niceties, what has been said sufficing to shew, that all Arguments consisting of but two Propositions, are real *Enthymemes*, and reducible to complete Syllogisms of some one Form or other. As therefore the Ground on which the Conclusion rests, must needs be always the same with that of the Syllogisms to which they belong, we have here an universal Criterion, whereby at all times to ascertain the Justness and Validity of our Reasonings in this Way.

XIII. THE next Species of Reasoning we shall take notice of here, is what is commonly known by the Name of a *Sorites*. This is a Way of arguing, in which a great Number of Propositions are so linked together, that the Predicate of one, becomes continually the Subject of the next following, until

*A Series of
plain simple
Syllogisms.*

ast a Conclusion is formed, by bringing together the Subject the first Proposition, and the Predicate of the last. Of this is the following Argument.

God is omnipotent.

An omnipotent Being can do every thing possible.

He that can do every thing possible, can do whatever involves not a Contradiction

Therefore God can do whatever involves not a Contradiction.

This particular Combination of Propositions, may be continued to any Length we please, without in the least weakening the Ground upon which the Conclusion rests. The Reason is, because the *Sorites* itself may be resolved into as many simple Syllogisms, as there are middle Terms in it; where it is found universally to hold, that when such a Resolution is made, and the Syllogisms are placed in train, the Conclusion of the last in the Series, is also the Conclusion of the *Sorites*. This kind of Argument therefore, as it serves to unite several Syllogisms into one, must stand upon the same foundation with the Syllogisms of which it consists, and is indeed, properly speaking, no other than a compendious way of Reasoning syllogistically. Any one may be satisfied of this at pleasure, if he but takes the Trouble of resolving the foregoing *Sorites* into two distinct Syllogisms. For he will there find, that he arrives at the same Conclusion, and at too by the very same Train of Thinking, but with abundantly more Words, and the Addition of two superfluous Propositions.

XIV. WHAT is here said of plain simple Propositions, may be as well applied to those that are conditional; that is, any Number of them may be joined together in a Series, that the Consequent

*A Sorites of
hypothetical
Syllogisms.*

one, shall become continually the Antecedent of the next following; in which Case, by establishing the Antecedent of the first Proposition, we establish the Consequent of the last, by removing the last Consequent, remove also the first Antecedent. This Way of Reasoning is exemplified in the following Argument.

If we love any Person, all Emotions of Hatred towards him cease.

If all Emotions of Hatred towards a Person cease, we cannot rejoice in his Misfortunes.

If we rejoice not in his Misfortune, we certainly wish him no Injury.

Therefore if we love a Person, we wish him no Injury.

It is evident that this *Sorites*, as well as the last, may be resolved into a Series of distinct Syllogisms, with this only Difference, that here the Syllogisms are all conditional. But as the Conclusion of the last Syllogism in the Series, is the same with the Conclusion of the *Sorites*, it is plain, that this also is a compendious Way of Reasoning, whose Evidence arises from the Evidence of the several single Syllogisms, into which it may be resolved.

The Ground of Reasoning by Induction. XV. I COME now to that kind of Argument, which Logicians call *Induction*; in order to the right understanding of which, it will be necessary to observe, that our general Ideas are for the most part capable of various Subdivisions. Thus the Idea of the lowest Species, may be subdivided into its several Individuals, the Idea of any Genus, into the different Species it comprehends, and so of the rest. If then we suppose this Distribution to be duly made, and so as to take in the whole Extent of the Idea to which it belongs; then it is plain, that all the Subdivisions or Parts of any Idea taken together, constitute that whole Idea. Thus the several Individuals of any Species taken together, constitute the whole Species, and all the various Species comprehended under any Genus, make up the whole Genus. This being allowed, it is apparent, that whatever may be affirmed of all the several Subdivisions and Classes of any Idea, ought to be affirmed of the whole general Idea, to which these Subdivisions belong. What may be affirmed of all the Individuals of any Species, may be affirmed of the whole Species; and what may be affirmed of all the Species of any Genus, may be also affirmed of the whole Genus; because all the Individuals taken together, are the same with the Species, and all the Species taken together, the same with the Genus.

The Form and Structure of an Argument by Induction. XVI. THIS Way of arguing, where we infer universally concerning any Idea, what we had before affirmed or denied separately, of all its several Subdivisions and Parts, is called Reasoning by *Induction*. Thus if we suppose the whole Tribe of Animals, subdivided into Men, Beasts, Birds, Insects, and Fishes, and then reason concerning them after this manner: *All Men have a Power of beginning Motion; all Beasts, Birds and Insects, have a Power of beginning Motion; all Fishes have a Power of beginning Motion; therefore all Animals have a Power of beginning Motion.* The Argument is an *Induction*. When the Subdivisions are just, so as to take in the whole general Idea, and the Enumeration is perfect, that

s, extends to all and every of the inferior Classes or Parts; here the *Induction* is complete, and the manner of Reasoning by *Induction*, is apparently conclusive.

XVII. THE last Species of Syllogisms I shall take notice of in this Chapter, is that commonly distinguished by the Name of a *Dilemma*.

The Ground of Argumentation in a Dilemma.

A *Dilemma* is an Argument, by which we endeavour to prove the Absurdity or Falshood of some Assertion. In order to this we assume a conditional Proposition, the Antecedent of which is the Assertion to be disproved, and the Consequent a disjunctive Proposition, enumerating all the possible Suppositions upon which that Assertion can take place. If then it appears, that all these several Suppositions ought to be rejected, it is plain, that the Antecedent or Assertion itself, must be so too. When therefore such a Proposition as that before-mentioned, is made the *Major* of any Syllogism; if the *Minor* rejects all the Suppositions contained in the Consequent, it follows necessarily, that the Conclusion ought to reject the Antecedent, which, as we have said, is the very Assertion to be disproved. This particular Way of arguing, is that which Logicians call a *Dilemma*; and from the Account here given of it, it appears, that we may in the general define it, to be a *hypothetical Syllogism, where the Consequent of the Major is an disjunctive Proposition, which is wholly taken away or removed in the Minor*. Of this kind is the following:

If God did not create the World perfect in its kind, it must either proceed from want of Inclination, or from want of Power.

But it could not proceed either from want of Inclination, or from want of Power.

Therefore he created the World perfect in its kind. Or, which is the same thing: 'Tis absurd to say that he did not create the World perfect in its kind.

XVIII. THE Nature then of a *Dilemma* is universally this. The *Major* is a conditional Proposition, whose Consequent contains all the several Suppositions upon which the Antecedent can take place. As therefore these Suppositions are wholly removed in the *Minor*, it is evident that the Antecedent must be so too; insomuch that we here always argue from the Removal of the Consequent, to the Removal of the Antecedent. That is, a *Dilemma* is an Argument, in the *modus tollens* of hypothetical Syllogisms, as Logicians love to speak. Hence it is plain, that the Antecedent of the

An universal Description of it.

Major is an affirmative Proposition, the Conclusion of the *Dilemma* will be negative ; but if it is a negative Proposition, the Conclusion will be affirmative. I cannot dismiss this Subject without observing, that as there is something very curious and entertaining in the Structure of a *Dilemma*, so is it a manner of Reasoning, that occurs frequently in Mathematical Demonstrations. Nothing is more common with *Euclid*, when about to shew the Equality of two given Figures, or which is the same thing, to prove the Absurdity of asserting them unequal ; nothing I say is more common with him than to assume, *that if the one is not equal to the other, it must be either greater or less* : And having destroyed both these Suppositions, upon which alone the Assertion can stand, he thence very naturally infers, that the Assertion itself is false. Now this is precisely the Reasoning of a *Dilemma*, and in every Step coincides with the Frame and Composition of that Argument, as we have described it above.

C H A P. V.

Of DEMONSTRATION.

*Of Reasoning
by a Concatenation
of Syllogisms.*

I. **H**AVING dispatched what seemed necessary to be said with regard to the Forms of Syllogisms, we now proceed to explain their Use and Application in Reasoning. We have seen, that in all the different Appearances they put on, we still arrive at a just and legitimate Conclusion : Now it often happens, that the Conclusion of one Syllogism, becomes a previous Proposition in another, by which means great Numbers of them are sometimes linked together in a Series, and Truths are made to follow one another in train. And as in such a Concatenation of Syllogisms, all the various Ways of Reasoning that are truly conclusive, may be with Safety introduced ; hence it is plain, that in deducing any Truth from its first Principles, especially where it lies at a considerable Distance from them, we are at Liberty to combine all the several kinds of Arguments above explained, according as they are found best to suit the End and Purpose of our Enquiries. When a Proposition is thus by means of Syllogisms, collected from others more evident and known, it is said to be *proved* ; so that we may in the general define
the

The Proof of a Proposition, to be a Syllogism, or Series of Syllogisms, collecting that Proposition from known and evident Truths. But more particularly, if the Syllogisms of which the Proof consists, admit of no Premises but Definitions, self-evident Truths, and Propositions already established, then is the Argument so constituted called a *Demonstration*; whereby it appears, that Demonstrations are ultimately founded on Definitions, and self-evident Propositions.

II. BUT as a Demonstration oft-times consists of a long Chain of Proofs, where all the various Ways of arguing have place, and where the Ground of Evidence must of course be different in different Parts, agreeably to the Form of the Argument made use of; it may not perhaps be unacceptable, if we here endeavour to reduce the Evidence of Demonstration to one simple Principle, whence as a sure and unalterable Foundation, the Certainty of it may in all Cases be derived. In order to this we must observe, that all Syllogisms whatsoever, whether compound, multiform, or defective, are reducible to plain simple Syllogisms in some one of the four Figures. But this is not all. Syllogisms of the first Figure in particular, admit of all possible Conclusions; that is, any Proposition whatsoever, whether an universal Affirmative, or universal Negative, a particular Affirmative, or particular Negative, which fourfold Division, as we have already demonstrated, in the second Part, embraces all their Varieties; any one I say of these may be inferred, by virtue of some Syllogism in the first Figure. By this means it happens, that the Syllogisms of all the other Figures, are reducible also to Syllogisms of the first Figure, and may be considered as standing on the same Foundation with them. We cannot here demonstrate and explain the manner of this Reduction, because it would too much swell the Bulk of this Treatise. It is enough to take notice, that the thing is universally known and allowed among Logicians, to whose Writings we refer such as desire farther Satisfaction in this Matter. This then being laid down, it is plain, that any Demonstration whatsoever, may be considered as composed of a Series of Syllogisms, all in the first Figure. For since all the Syllogisms that enter the Demonstration, are reducible to Syllogisms of some one of the four Figures, and since the Syllogisms of all the other Figures are farther reducible to Syllogisms of the first Figure, it is evident, that the whole Demonstration may be resolved into a Series of these last Syllogisms. Let us now, if possible, discover the Ground, upon

*All Syllogisms
whatsoever
reducible to
the first Fi-
gure.*

which the Conclusion rests, in Syllogisms of the first Figure; because, by so doing, we shall come at an universal Principle or Certainty, whence the Evidence of all Demonstrations in all their Parts may be ultimately derived.

III. **THE** Rules then of the first Figure are *briefly* these. The *middle Term* is the Subject of the *Major Proposition*, and the Predicate of the *Minor*. The *Major* is always an universal Proposition, and the *Minor* always affirmative. Let

us now see what Effect these Rules will have in Reasoning. The *Major* is an universal Proposition, of which the *middle Term* is the Subject, and the *Predicate of the Conclusion* the Predicate. Hence it appears, that in the *Major*, the *Predicate of the Conclusion* is always affirmed or denied universally of the *middle Term*. Again, the *Minor* is an affirmative Proposition, of which the *Subject of the Conclusion* is the Subject, and the *middle Term* the Predicate. Here then the

Subject of the Conclusion; that is, the *Subject of the Minor*, is affirmed to be comprehended under the *Predicate of the Major*. Thus then the *middle Term* is the Subject of a Syllogism of the first Figure, and the *Conclusion* is universally affirmed or denied of it. The *Subject of the Conclusion* is then a Part of that Idea. Hence it follows, that the *Predicate of the Conclusion* is affirmed or denied of the Subject. To illustrate this more fully, we shall resume one of the Syllogisms of the first Figure.

Man is a Creature. Reason and Liberty is accountable

Man is a Creature. Reason and Liberty is accountable for his Actions.

Here the *middle Term* is the Predicate of the Conclusion, and the Subject of all Creatures that have Reason and Liberty. In the second Proposition, the *middle Term* is affirmed to be, or to be accountable for, Creatures. Hence the Conclusion follows, viz. that *Man*

is accountable for his Actions. I say this follows necessarily, because the *middle Term* Reason and Liberty be that which constitutes the *Essence*, and *Man* has Reason and Liberty. Hence that which constitutes him accountable for his Actions, where the *Major* is a negative Proposition, is the *Predicate of the Conclusion* universal, as the *Minor* always affirms the Subject

Subject of the Conclusion, to be or make a Part of that *middle Term*, it is no less evident, that the *Predicate of the Conclusion*, ought in this Case to be denied of the *Subject*. So that the Ground of Reasoning in all Syllogisms of the first Figure, is manifestly this: *Whatever may be affirmed universally of any Idea, may be affirmed of every or any Number of Particulars comprehended under that Idea.* And again: *Whatever may be denied universally of any Idea, may be in like manner denied, of every or any Number of its Individuals.* These two Propositions, are called by Logicians, the *Dictum de omni*, and *Dictum de nullo*, and are indeed the great Principles of syllogistic Reasoning; inasmuch as all Conclusions whatsoever, either rest immediately upon them, or upon Propositions deduced from them. But what adds greatly to their Value is, that they are really self-evident Truths, and such as we cannot gainsay, without running into an express Contradiction. To affirm for instance, that *No Man is perfect*, and yet argue that *Some Men are perfect*; or to say that *All Men are mortal*, and yet that *Some Men are not mortal*, is to assert a thing to be and not to be at the same time.

IV. AND now I think we are sufficiently authorized to affirm, that all Syllogisms of the first Figure, if the *Premisses* are true, the *Conclusion* must needs be true. If it be true that the *Predicate of the Conclusion*, whether affirmative or negative, agrees universally to some Idea, and if it be also true, that the *Subject of the Conclusion*, is a Part of or comprehended under that Idea, then it necessarily follows, that the *Predicate of the Conclusion*, agrees also to the *Subject*. For to assert the contrary, would be to run counter to some one of the two Principles before established; that is, it would be to maintain an evident Contradiction. And thus we are come at last to the Point we have been all along endeavouring to establish, namely; that every Proposition which can be demonstrated is necessarily true. For as every Demonstration may be resolved into a Series of Syllogisms all in the first Figure, and as in any one of these Syllogisms, if the *Premisses* are true, the *Conclusion* must needs be so too; it evidently follows, that if all the several *Premisses* are true, all the several *Conclusions* are so, and consequently the *Conclusion* also of the last Syllogism, which is always the Proposition to be demonstrated. Now that all the *Premisses* of a Demonstration are true, will easily appear, from the very Nature and Definition of that Form of Reasoning.

*Demonstration
an infallible
Guide to Truth
and Certainty.*

which the Conclusion rests, in Syllogisms of the first Figure; because, by so doing, we shall come at an universal Principle of Certainty, whence the Evidence of all Demonstrations in all their Parts may be ultimately derived.

III. THE Rules then of the first Figure are briefly these. The *middle Term* is the Subject of the *Major* Proposition, and the Predicate of the *Minor*. The *Major* is always an universal Proposition, and the *Minor* always affirmative. Let

The Ground of Reasoning in the first Figure.

us now see what Effect these Rules will have in Reasoning. The *Major* is an universal Proposition, of which the *middle Term* is the Subject, and the *Predicate of the Conclusion* the Predicate. Hence it appears, that in the *Major*, the *Predicate of the Conclusion* is always affirmed or denied universally of the *middle Term*. Again, the *Minor* is an affirmative Proposition, whereof the *Subject of the Conclusion* is the Subject, and the *middle Term* the Predicate. Here then the *middle Term* is affirmed of the *Subject of the Conclusion*; that is, the *Subject of the Conclusion* is affirmed to be comprehended under, or to make a Part of the *middle Term*. Thus then we see what is done in the *Premisses* of a Syllogism of the first Figure. The *Predicate of the Conclusion* is universally affirmed or denied of some Idea. The *Subject of the Conclusion* is affirmed to be or to make a Part of that Idea. Hence it naturally and unavoidably follows, that the *Predicate of the Conclusion*, ought to be affirmed or denied of the Subject. To illustrate this by an Example, we shall resume one of the Syllogisms of the first Chapter.

Every Creature possessed of Reason and Liberty is accountable for his Actions.

Man is a Creature possessed of Reason and Liberty:

Therefore Man is accountable for his Actions.

Here in the first Proposition, the Predicate of the Conclusion *Accountableness*, is affirmed of all Creatures that have *Reason and Liberty*. Again in the second Proposition, *Man*, the Subject of the Conclusion, is affirmed to be, or to make a Part of this Class of Creatures. Hence the Conclusion necessarily and unavoidably follows, viz. that *Man is accountable for his Actions*. I say this follows necessarily and unavoidably. Because if Reason and Liberty be that which constitutes a Creature *accountable*, and *Man* has Reason and Liberty, 'tis plain he has that which constitutes him *accountable*. In like manner, where the *Major* is a negative Proposition, or denies the *Predicate of the Conclusion* universally of the *middle Term*, as the *Minor* always asserts the

Subject

Subject of the Conclusion, to be or make a Part of that *middle Term*, it is no less evident, that the *Predicate of the Conclusion*, ought in this Case to be denied of the *Subject*. So that the Ground of Reasoning in all Syllogisms of the first Figure, is manifestly this: *Whatever may be affirmed universally of any Idea, may be affirmed of every or any Number of Particulars comprehended under that Idea.* And again: *Whatever may be denied universally of any Idea, may be in like manner denied, of every or any Number of its Individuals.* These two Propositions, are called by Logicians, the *Dictum de omni*, and *Dictum de nullo*, and are indeed the great Principles of syllogistic Reasoning; inasmuch as all Conclusions whatsoever, either rest immediately upon them, or upon Propositions deduced from them. But what adds greatly to their Value is, that they are really self-evident Truths, and such as we cannot gainsay, without running into an express Contradiction. To affirm for instance, that *No Man is perfect*, and yet argue that *Some Men are perfect*; or to say that *All Men are mortal*, and yet that *Some Men are not mortal*, is to assert a thing to be and not to be at the same time.

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*Demonstration
an infallible
Guide to Truth
and Certainty.*

soning. A Demonstration as we have said, is a Series of Syllogisms, all whose Premisses are either Definitions, self-evident Truths, or Propositions already established. Definitions are identical Propositions, wherein we connect the Description of an Idea, with the Name by which we chuse to have that Idea called; and therefore as to their Truth there can be no Dispute. Self-evident Propositions appear true of themselves, and leave no Doubt or Uncertainty in the Mind. Propositions before established, are no other than Conclusions, gained by one or more Steps, from Definitions and self-evident Principles; that is, from true Premisses, and therefore must needs be true. Whence all the previous Propositions of a Demonstration, being we see manifestly true, the last Conclusion, or Proposition to be demonstrated, must be so too. So that Demonstration not only leads to certain Truth, but we have here also a clear View, of the Ground and Foundation of that Certainty. For as in demonstrating, we may be said to do nothing more, than combine a Series of Syllogisms together, all resting on the same Bottom; it is plain, that one uniform Ground of Certainty runs thro' the whole, and that the Conclusions are every where built upon some one of the two Principles before established as the Foundation of all our Reasoning. These two Principles are easily reduced into one, and may be expressed thus. *Whatever Predicate, whether affirmative or negative, agrees universally to any Idea, the same must needs agree to every or any Number of Individuals, comprehended under that Idea.* And thus at length we have, according to our first Design, reduced the Certainty of Demonstration to one simple and universal Principle, which carries its own Evidence along with it, and which is indeed the ultimate Foundation of all syllogistic Reasoning.

The Rules of Logick furnish a sufficient Criterion for the distinguishing between Truth and Falshood.

V. DEMONSTRATION therefore, serving as an infallible Guide to Truth, and standing on so sure and unalterable a Basis, we may now venture to assert, what I doubt not will appear a Paradox to many, namely; that the Rules of Logick furnish a sufficient Criterion, for the distinguishing between Truth and Falshood. For since every Proposition that can be demonstrated, is necessarily true, he is able to distinguish Truth from Falshood, who can with Certainty judge, when a Proposition is duely demonstrated. Now a Demonstration is, as we have said, nothing more than a Concatenation of Syllogisms, all whose Premisses are Definitions, self-evident Truths, or

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Propositions previously established. To judge therefore of the Validity of a Demonstration, we must be able to distinguish, whether the Definitions that enter it are genuine, and truly descriptive of the Ideas they are meant to exhibit; whether the Propositions assumed without Proof as intuitive Truths, have really that Self-evidence to which they lay claim: whether the Syllogisms are drawn up in due Form, and agreeable to the Laws of Argumentation: in fine, whether they are combined together in a just and orderly Manner, so that no demonstrable Propositions serve any where as Premisses, unless they are Conclusions of previous Syllogisms. Now it is the Business of Logick, in explaining the several Operations of the Mind, fully to instruct us in all these Points. It teaches the Nature and End of Definitions, and lays down the Rules by which they ought to be framed. It unfolds the several Species of Propositions, and distinguishes the self-evident from the demonstrable. It delineates also the different Forms of Syllogisms, and explains the Laws of Argumentation proper to each. In fine, it describes the Manner of combining Syllogisms, so as that they may form a Train of Reasoning, and lead to the successive Discovery of Truth. The Precepts of Logick therefore, as they enable us to judge with Certainty, when a Proposition is duly demonstrated, furnish a sure *Criterion*, for the distinguishing between Truth and Falshood.

VI. BUT perhaps it may be objected, that Demonstration is a thing very rare and uncommon, as being the Prerogative of but a few Sciences, and therefore the *Criterion* here given, can be of no great Use. I answer, that where-ever by the bare Contemplation of our Ideas, Truth is discoverable, there also Demonstration may be attained. Now that I think is an abundantly sufficient *Criterion*, which enables us to judge with Certainty, in all Cases where the Knowledge of Truth comes within our reach; for with Discoveries, that lie beyond the Limits of the human Mind, we have properly no Business nor Concernment. When a Proposition is demonstrated, we are certain of its Truth. When on the contrary our Ideas are such, as have no visible Connection nor Repugnance, and therefore furnish not the proper Means of tracing their Agreement or Disagreement, there we are sure that Knowledge, *Scientifical* Knowledge I mean, is not attainable. But where there is some Foundation of Reasoning, which yet amounts not to the full Evidence of Demonstration, there the Precepts of Logick, by teaching

And extending to all Cases where a certain Knowledge of Truth is attainable.

us to determine aright of the Degree of Proof, and of what is still wanting to render it full and complete, enable us to make a due Estimate of the Measures of Probability, and to proportion our Assent to the Grounds on which the Proposition stands. And this is all we can possibly arrive at, or even so much as hope for, in the Exercise of Faculties so imperfect and limited as ours. For it were the height of Folly to expect a *Criterion*, that should enable us to distinguish Truth from Falshood, in Cases where a certain Knowledge of Truth is not attainable.

VII. WE have now done with what regards the Ground and Evidence of Demonstration; but before we conclude this Chapter, it may not be improper to take notice of the Distinction of it into *direct* and *indirect*. A *direct Demonstration* is, when beginning with Definitions, self-evident Propositions, or known and allowed Truths, we form a Train of Syllogisms, and combine them in an orderly Manner, continuing the Series thro' a Variety of successive Steps, until at last we arrive at a Syllogism, whose Conclusion is the Proposition to be demonstrated. Proofs of this Kind, leave no Doubt or Uncertainty behind them, because all the several Premisses being true, the Conclusions must be so too, and of course the very last Conclusion, or Proposition to be proved. I shall not therefore any farther enlarge upon this Method of Demonstrating, having I hope sufficiently explained it in the foregoing Part of this Chapter, and shewn wherein the Force and Validity of it lies. The other Species of Demonstration is the *indirect*, or, as it is sometimes called, the *Apagogical*. The Manner of proceeding here is, by assuming a Proposition which directly contradicts that we mean to demonstrate, and thence by a continued Train of Reasoning, in the Way of a direct Demonstration, deducing some Absurdity or manifest Untruth. For hereupon we conclude that the Proposition assumed was false, and thence again by an immediate Consequence, that the Proposition to be demonstrated is true. Thus *Euclid* in his third Book being to demonstrate, that *Circles which touch one another inwardly have not the same Center*, assumes the direct contrary to this, viz. that they have the same Center, and thence by an evident Train of Reasoning proves, that a Part is equal to the Whole. The Supposition therefore leading to this Absurdity he concludes to be false, viz. that *Circles touching one another inwardly have the same Center*, and thence again immediately infers, that they have not the same Center.

VIII. Now

Chap. V. Of REASONING.

141

VIII. Now because this Manner of Demonstration, is accounted by some, not altogether so clear and satisfactory, nor to come up to that full Degree of Evidence, which we meet with in the direct Way of Proof; I shall therefore endeavour here to give a particular Illustration of it, and to shew, that it equally with the other leads to Truth and Certainty. In order to this we must observe, that two Propositions are said to be *Contradictory* one of another, when that which is asserted to be in the one, is asserted not to be in the other. Thus the Propositions: *Circles that touch one another inwardly have the same Center: and Circles that touch one another inwardly have not the same Center:* are *Contradictories*; because the second asserts the direct contrary of what is asserted in the first. Now in all contradictory Propositions this holds universally, that one of them is necessarily true, and the other necessarily false. For if it be true, that Circles which touch one another inwardly have not the same Center, it is unavoidably false that they have the same Center. On the other hand, if it be false that they have the same Center, it is necessarily true that they have not the same Center. Since therefore, it is impossible for them to be both true or both false at the same time, it unavoidably follows, that one is necessarily true, and the other necessarily false. This then being allowed, which is indeed self-evident, if any two contradictory Propositions are assumed, and one of them can by a clear Train of Reasoning be demonstrated to be false, it necessarily follows that the other is true. For as the one is necessarily true, and the other necessarily false, when we come to discover which is the false Proposition, we thereby also know the other to be true.

Ground of Reasoning in indirect Demonstrations.

IX. Now this is precisely the Manner of an indirect Demonstration, as is evident from the Account given of it above. For there we assume a Proposition, which directly contradicts that we mean to demonstrate, and having by a continued Series of Proofs shewn it to be false, thence infer that its Contradictory, or the Proposition to be demonstrated, is true. As therefore this last Conclusion is certain and unavoidable, let us next inquire, after what manner we come to be satisfied of the Falseness of the assumed Proposition, that so no possible Doubt may remain, as to the Force and Validity of Demonstrations of this Kind. The manner then is plainly this. Beginning with the assumed Proposition, we by the Help of Definens, self evident Truths,

Indirect Demonstrations a sure Guide to Certainty.

or Propositions already established, continue a Series of Reasoning in the Way of a direct Demonstration, until at length we arrive at some Absurdity or known Falshood. Thus *Euclid*, in the Example before-mentioned, from the Supposition that Circles touching one another inwardly have the same Center, deduces that *a Part is equal to the Whole*. Since therefore by a due and orderly Process of Reasoning, we come at last to a false Conclusion, it is manifest that all the Premisses cannot be true. For were all the Premisses true, the last Conclusion must be so too, by what has been before demonstrated. Now as to all the other Premisses made use of in the Course of Reasoning, they are manifest and known Truths by Supposition, as being either Definitions, self-evident Propositions, or Truths previously established. The assumed Proposition is that only as to which any Doubt or Uncertainty remains: That alone therefore can be false, and indeed from what has been already shewn, must unavoidably be so. And thus we see, that in indirect Demonstrations, two contradictory Propositions being laid down, one of which is demonstrated to be false, the other, which is always the Proposition to be proved, must necessarily be true; so that here, as well as in the direct Way of Proof, we arrive at a clear and satisfactory Knowledge of Truth.

*A particular
Case of indi-
rect Demon-
strations.*

X. THIS is universally the Method of Reasoning, in all apogogical or indirect Demonstrations; but there is one particular Case which has something so singular and curious in it, that it well deserves to be mentioned by itself; more especially, as the Ground on which the Conclusion rests, will require some farther Illustration. It is in short this: that if any Proposition is assumed, from which in a direct Train of Reasoning we can deduce its Contradictory, the Proposition so assumed is false, and the contradictory one true. For if we suppose the assumed Proposition to be true, then, since all the other Premisses that enter the Demonstration are also true, we shall have a Series of Reasoning, consisting wholly of true Premisses; whence the last Conclusion or Contradictory of the assumed Proposition must be true likewise. So that by this means, we should have two contradictory Propositions both true at the same time, which is manifestly impossible. The assumed Proposition therefore, whence this Absurdity flows, must necessarily be false, and consequently its Contradictory, which is here the Proposition deduced from it, must be true. If then any Proposition is proposed to be demonstrated, and we assume the Contradictory of that

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Proposition, and thence directly infer the Proposition to be demonstrated, by this very means we know, that the Proposition so inferred is true. For since from an assumed Proposition we have deduced its Contradictory, we are thereby certain that the assumed Proposition is false; and if so, then its Contradictory, or that deduced from it, which in this Case is the same with the Proposition to be demonstrated, must be true.

XI. THAT this is not a mere empty Speculation, void of all Use and Application in Practice, is evident from the Conduct of the Mathematicians, who have adopted this Manner of Reasoning, and given it a Place among their Demonstrations. We have a curious Instance of it, in the twelfth Proposition of the ninth Book of the *Elements*. Euclid there proposes to demonstrate, that in any Series of Numbers, rising from Unity in Geometrical Progression, all the prime Numbers that measure the last Term in the Series, will also measure the next after Unity. In order to this he assumes the Contradictory of the Proposition to be demonstrated; namely, that some prime Number measuring the last Term in the Series, does not measure the next after Unity: and thence by a continued Train of Reasoning proves, that it actually does measure it. Hereupon he concludes the assumed Proposition to be false, and that which is deduced from it, or its Contradictory, which is the very Proposition he proposed to demonstrate, to be true. Now that this is a just and conclusive Way of Reasoning, is abundantly manifest, from what we have so clearly established above. I would only here observe, how necessary some Knowledge of the Rules of Logick is, to enable us to judge of the Force, Justness, and Validity of Demonstrations; since such may sometimes occur, where the Truth of the Proposition demonstrated, will neither be owned nor perceived, unless we know before-hand by means of Logick, that a Conclusion so deduced, is necessarily true and valid. For tho' it is readily allowed, that by the mere Strength of our natural Faculties, we can at once discern, that of two contradictory Propositions, the one is necessarily true, and the other necessarily false: yet when they are so linked together in a Demonstration, as that the one serves as a previous Proposition, whence the other is deduced; it does not so immediately appear, without some Knowledge of the Principles of Logick, why that alone which is collected by Reasoning, ought to be embraced as true, and the other whence it is collected, to be rejected as false.

A due Knowledge of the Principles of Logick indispensably necessary to make us proper Judges of Demonstration.

*And of itself
sufficient to
guard us a-
gainst Error
and false Rea-
soning.*

XII. HAVING thus, I hope, sufficiently evinced the Certainty of Demonstration in all its Branches, and shewn the Rules by which we ought to proceed, in order to arrive at a just Conclusion, according to the various Ways of arguing made use of; I hold it needless to enter upon a particular

Consideration of those several Species of false Reasoning, which Logicians distinguish by the Name of *Sophisms*. He that thoroughly understands the Form and Structure of a good Argument, will of himself readily discern every Deviation from it. And altho' *Sophisms* have been divided into many Classes, which are all called by sounding Names, that therefore carry in them much Appearance of Learning; yet are the Errors themselves so very palpable and obvious, that I should think it lost Labour to write for a Man capable of being misled by them. Here therefore we chuse to conclude this Part of *Logic*, and shall in the next Book give some Account of *Method*, which tho' inseparable from Reasoning, is nevertheless always considered by Logicians, as a distinct Operation of the Mind; because its Influence is not confined to the mere Exercise of the reasoning Faculty, but extends in some Degree to all the Transactions of the Understanding.



THE
ELEMENTS
OF
LOGICK.

BOOK IV.

Of METHOD.

CHAP. I.

*Of Method in general, and the Division of it into
Analytic and Synthetic.*

I. **W**E have now done with the three first Operations of the Mind, whose Office it is to search after Truth, and enlarge the Bounds of human Knowledge. There is yet a fourth, which regards the Disposal and Arrangement of our Thoughts, when we endeavour so to put them together, as that their mutual Connection and Dependence may be clearly seen. This is what Logicians call *Method*, and place always the last in Order in explaining the Powers of the Understanding; because it necessarily supposes a previous Exercise of our other Faculties, and some Progress made in Knowledge, before we can exert it in any extensive Degree. It often happens in the Pursuit

The Understanding sometimes employed in putting together known Truths.

of Truth, that unexpected Discoveries present themselves to the Mind, and those too relating to Subjects, very remote from that about which we are at present employed. Even the Subjects themselves of our Enquiry, are not always chosen with a due Regard to Order, and their Dependence one upon another. Chance, our particular Way of Life, or some present and pressing Views, often prompt us to a Variety of Researches, that have but little Connection in the Nature of Things. When therefore a Man accustomed to much thinking, comes after any considerable Interval of Time, to take a Survey of his intellectual Acquisitions, he seldom finds Reason to be satisfied with that Order and Disposition, according to which they made their Entrance into his Understanding. They are there dispersed and scattered, without Subordination, or any just and regular Coherence; insomuch that the Subserviency of one Truth to the Discovery of another, does not so readily appear to the Mind. Hence he is convinced of the Necessity of distributing them into various Classes, and combining into an uniform System, whatever relates to one and the same Subject. Now this is the true and proper Business of *Method*; to ascertain the various Divisions of human Knowledge, and so to adjust and connect the Parts in every Branch, that they may seem to grow one out of another, and form a regular Body of Science, rising from first Principles, and proceeding by an orderly Concate-nation of Truths.

*Sometimes in
the Search and
Discovery of
Truths, we are
unknown.*

II. In this View of Things it is plain, that we must be before-hand well acquainted with the Truths we are to combine together; otherwise how could we discern their several Connections and Relations, or so dispose of them as their mutual Dependence may require. But now it often happens, that the Understanding is employed, not in the Arrangement and Composition of known Truths, but in the Search and Discovery of such as are unknown. And here the Manner of proceeding is very different, inasmuch as we assemble at once our whole Stock of Knowledge relating to any Subject, and after a general Survey of Things, begin with examining them separately and by Parts. Hence it comes to pass, that whereas at our first setting out, we were acquainted only with some of the grand Strokes and Out-lines, if I may so say of Truth, by thus pursuing her through her several Windings and Recesses, we gradually discover those more inward and finer Touches, whence she derives all her Strength, Symmetry, and Beauty. And here it is, that when

when by a narrow Scrutiny into Things, we have unravelled any Part of Knowledge, and traced it to its first and original Principles, insomuch that the whole Frame and Contexture of it lies open to the View of the Mind; here I say it is, that taking it the contrary Way, and beginning with these Principles, we can so adjust and put together the Parts, as the Order and Method of Science requires.

III. BUT as these Things are best understood when illustrated by Examples, especially if they are obvious, and taken from common Life; let us suppose any Machine, for instance a Watch, presented to us, whose Structure and Composition we are as yet unacquainted with, but want if possible to discover. The Manner of proceeding in this Case is, by taking the Whole to Pieces, and examining the Parts separately one after another. When by such a Scrutiny we have thoroughly informed ourselves of the Frame and Contexture of each, we then compare them together, in order to judge of their mutual Action and Influence. By this means we gradually trace out the inward Make and Composition of the Whole, and come at length to discern, how Parts of such a Form, and so put together as we found, in unravelling and taking them asunder, constitute that particular Machine called a Watch, and contribute to all the several Motions and Phænomena observable in it. This Discovery being made, we can take Things the contrary Way, and beginning with the Parts, so dispose and connect them, as their several Uses and Structures require, until at length we arrive at the Whole itself, from the unravelling of which these Parts resulted.

*Illustrated by
the Similitude
of a Watch.*

IV. AND as it is in tracing and examining the Works of Art, so is it in a great measure in unfolding any Part of human Knowledge. For the Relations and mutual Habitues of Things do not always immediately appear, upon comparing them one with another. Hence we have recourse to intermediate Ideas, and by means of them are furnished with those previous Propositions, that lead to the Conclusion we are in quest of. And if it so happen, that the previous Propositions themselves are not sufficiently evident, we endeavour by new middle Terms, to ascertain their Truth, still tracing Things backward in a continual Series, until at length we arrive at some Syllogism, where the Premisses are first and self-evident Principles. This done, we become perfectly satisfied as to the Truth of all the Conclusions we have passed through, inasmuch as they are now seen to stand

*Ground of the
Analytic and
Synthetic
Methods.*

upon the firm and immoveable Foundation of our intuitive Perceptions. And as we arrived at this Certainty, by tracing Things backward to the original Principles whence they flow, so may we at any time renew it by a direct contrary Process, if beginning with these Principles, we carry the Train of our Thoughts forward, until they lead us by a connected Chain of Proofs to the very last Conclusion of the Series.

*Division of
Methods into
Analytic and
Synthetic.*

V. HENCE it appears, that in disposing and putting together our Thoughts, either for our own Use, that the Discoveries we have made may at all times lie open to the Review of the Mind; or where we mean to communicate and unfold the Discoveries to others, there are two Ways of proceeding equally within our Choice. For we may so propose the Truths relating to any Part of Knowledge, as they presented themselves to the Mind in the Manner of Investigation, carrying on the Series of Proofs in a reverse Order, until they at last terminate in first Principles: or beginning with these Principles, we may take the contrary Way, and from them deduce by a direct Train of Reasoning, all the several Propositions we want to establish. This Diversity in the Manner of arranging our Thoughts, gives rise to the twofold Division of Method established among Logicians. For Method, according to their Use of the Word, is nothing else but the Order and Disposition of our Thoughts relating to any Subject. When Truths are so proposed and put together, as they were or might have been discovered, this is called the *Analytic Method*, or the *Method of Resolution*; inasmuch as it traces Things backward to their Source, and resolves Knowledge into its first and original Principles. When on the other hand they are deduced from these Principles, and connected according to their mutual Dependence, inasmuch that the Truths first in Order, tend always to the Demonstration of those that follow, this constitutes what we call the *Synthetic Method*, or *Method of Composition*. For here we proceed by gathering together the several scattered Parts of Knowledge, and combining them into one Whole or System, in such manner, that the Understanding is enabled distinctly to follow Truth, through all her different Stages and Gradations.

*Consideration
of the
Order of
the
Method of
Invention.*

VI. THERE is this farther to be taken notice of, in relation to these two Species of Method; that the first has also obtained the Name of the *Method of Invention*, because it observes the Order in which our Thoughts succeed one another

another in the *Invention* or Discovery of Truth. The other again is often denominated the *Method of Doctrine* or *Instruction*, inasmuch as in laying our Thoughts before others, we generally chuse to proceed in the *Synthetic* Manner, deducing them from their first Principles. For we are to observe, that altho' there is great Pleasure in pursuing Truth in the Method of Investigation, because it places us in the Condition of the Inventor, and shews the particular Train and Process of Thinking, by which he arrived at his Discoveries; yet is it not so well accommodated to the Purposes of Evidence and Conviction. For at our first setting out, we are commonly unable to divine, where the Analysis will lead us; infomuch that our Researches are for some time, little better than a mere groping in the Dark. And even after Light begins to break in upon us, we are still obliged to many Reviews, and a frequent Comparison of the several Steps of the Investigation among themselves. Nay, when we have unravelled the whole, and reached the very Foundation on which our Discoveries stand, all our Certainty in regard to their Truth, will be found in a great measure to arise from that Connection we are now able to discern between them and first Principles, taken in the Order of Composition. But in the Synthetic Manner of disposing our Thoughts, the Case is quite different. For as we here begin with intuitive Truths, and advance by regular Deductions from them, every Step of the Procedure brings Evidence and Conviction along with it; so that in our Progress from one Part of Knowledge to another, we have always a clear Perception of the Ground on which our Assent rests. In communicating therefore our Discoveries to others, this Method is apparently to be chosen, as it wonderfully improves and enlightens the Understanding, and leads to an immediate Perception of Truth. And hence it is, that in the following Pages we chuse to distinguish it by the Name of the *Method of Science*; not only as in the Use of it we arrive at *Science* and Certainty, but because it is in fact the Method, in which all those Parts of human Knowledge, that properly bear the Name of *Sciences*, are and ought to be delivered. But we now proceed to explain these two kinds of Method more particularly.

C H A P. II.

Of the Method of Invention.

*Origin of the
several Arts
and Inventions
of human Life.*

I. **B**Y the *Method of Invention* we understand such a Disposition and Arrangement of our Thoughts, as follows the natural Procedure of the Understanding, and presents them in the Order in which they succeed one another in the Investigation and Discovery of Truth. Now it is plain, that to handle a Subject successfully according to this Method, we have no more to do, than observe the several Steps and Advances of our own Minds, and fairly copy them out to the View of others. And indeed it will be found to hold in general, with regard to all the active Parts of human Life, especially when reduced to that which is in the Schools termed an Art; that the Rules by which we conduct ourselves, are no other than a Series of Observations, drawn from the Attention of the Mind to what passes, while we exercise our Faculties in that particular Way. For when we set about any Invention or Discovery, we are always pushed on by some inward Principle, Disposition, or Aptitude shall I call it, which we experience in ourselves, and which makes us believe, that the Thing we are in quest of is not altogether beyond our reach. We therefore begin with essaying our Strength, and are sometimes successful, tho' perhaps more frequently not. But as the Mind when earnestly bent upon any Pursuit, is not easily discouraged by a few Disappointments, we are only set upon renewing our Endeavours, and by an obstinate Perseverance, and repeated Trials, often arrive at the Discovery of what we have in view. Now it is natural for a Man of a curious and inquisitive Turn, after having mastered any Part of Knowledge with great Labour and Difficulty, to set himself to examine how he happened to miscarry in his first Attempts, and by what particular Method of Procedure he at length came to be successful. By this means we discover on the one hand, those Rocks and Shelves which stand most in our way, and are apt to disturb and check our Progress; and on the other, that more sure and certain Course, which if we continue in steadily, will bring us to the Attainment of what we are in pursuit of. Hence spring all the Arts and Inventions of human Life, which, as we have already said, are founded upon a Series of Rules and Observations, pointing

ing out the true and genuine Manner of arriving at any Attainment. When the Mind rests satisfied in a bare Contemplation of the Rules, and the Reasons on which they are founded, this Kind of Knowledge is called Speculative. But if we proceed farther, and endeavour to apply these Rules to Practice, so as to acquire a Habit of exerting them on all proper Occasions, we are then said to be possessed of the Art itself.

II. FROM what has been said it appears, that in order distinctly to explain the Method of Invention, we must take a View of the Understanding as employed in the Search and Investigation of Truth. For by duely attending to its Procedure and Advances, we shall not only discover the Rules by which it conducts itself, but be enabled also to trace out the several Helps and Contrivances it makes use of, for the more speedy and effectual Attainment of its Ends. And when these Particulars are once known, it will not be difficult for us, in laying open our Discoveries to others, to combine our Thoughts agreeably to the Method here required. Because having fixed and ascertained the Rules of it, and being perfectly acquainted with the Conduct and Manner of the Mind, we need only take a Review of the several Truths as they succeed one another in the Series of Investigation, set them in order before us, and fairly transcribe the Appearance they make to the Understanding. Hence it is that Logicians, in treating of the Method of Invention, have not merely confined themselves to the laying down of Directions for the Disposal and Arrangement of our Thoughts; but have rather explained the Art itself, and established those Rules by which the Mind ought to proceed in the Exercise of its inventive Powers. For they rightly judged, that if these were once thoroughly understood, the other could no longer remain unknown. By this means it happens, that the *Method of Invention*, is become another Expression for the *Art of Invention*, and very often denotes the Conduct and Procedure of the Understanding in the Search of Truth. And as some Knowledge of the Principles of the Art, is in a manner absolutely necessary, towards a due Conception of the Rules by which we ought to govern and dispose our Thoughts in treating Subjects after this Method; we shall therefore follow the Example of other Logicians, and endeavour to give some short Account of the Business of Invention, and of those several Helps and Contrivances by which the Mind is enabled to facilitate and enlarge its Discoveries.

Why is treating of the Method of Invention, we must give some Account of the Art itself.

Attention and a comprehensive Understanding the preparatory Qualifications to Invention.

III. IT has been already observed, that when the Mind employs itself in the Search of unknown Truths, it begins with assembling at once its whole Stock of Knowledge relating to the Subject, and after a general Survey of Things, sets about examining them separately and by Parts. Now as in this separate Examination, the Number of Parts continually increase upon us; and as it is farther necessary, that we survey them on all Sides, compare them one with another, and accurately trace their mutual Habitues and Respects; it is from hence apparent, that in the Exercise of Invention, two things are of principal Consideration. First, an enlarged and comprehensive Understanding, able to take in the great Multitude of Particulars that frequently come under our Notice. Secondly, a strong Habit of Attention, that lets nothing remarkable slip its View, and distinguishes carefully all those Circumstances which tend to the illustrating and clearing the Subject we are upon. These are the great and preparatory Qualifications, without which it were in vain to hope, that any considerable Advance could be made, in enlarging the Bounds of human Knowledge. Nor ought we to esteem it a small Advantage, that they are in some measure in our own Power, and may by a proper Cultivation, be improved and strengthened to a Degree almost beyond Belief. We find by Experience, that the Study of Mathematics in particular is greatly serviceable to this End. Habits we all know grow stronger by Exercise, and as in this Science there is a perpetual Call upon our Attention, it by degrees becomes natural to us, so as that we can preserve it steady and uniform, thro' long and intricate Calculations, and that with little or no Fatigue to the Understanding. But a yet more wonderful Advantage arising from the Culture of the Mathematics is this, that hereby we in some measure extend the Dimensions of the human Mind, enlarge its Compass of Perception, and accustom it to wide and comprehensive Views of Things. For whereas at our first setting out, we often find it extremely difficult to master a short and easy Demonstration, and trace the Connection of its several Parts; yet as we advance in the Science, the Understanding is seen gradually to dilate, and stretch itself to a greater Size; insomuch that a long and intricate Series of Reasoning, is often taken in with scarce any Labour of Thought; and not only so, but we can in some Cases with a single Glance of our Minds, run thro'

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an entire System of Truths, and extend our View at once to all the several Links that unite and hold them together.

IV. WHEN we are furnished with these two preparatory Qualifications, the next Requisite to the Discovery of Truth is, a judicious Choice of intermediate Ideas. We have seen in the third Part of this Treatise, that many of our Ideas are of such a Nature, as not to discover their several Habitudes and Relations, by any immediate Comparison one with another. In this Case we must have recourse to intermediate Ideas; and the great Art lies, in finding out such as have an obvious and perceivable Connection with the Ideas, whose Relations we enquire after. For thus it is that we are furnished with known and evident Truths, to serve as Premisses for the Discovery of such as are unknown. And indeed the whole Business of Invention seems in a great measure to lie, in the due Assemblage and Disposition of these preliminary Truths. For they not only lead us Step by Step to the Discovery we are in quest of, but are so absolutely necessary in the Case, that without them it were in vain to attempt it; nothing being more certain, than that unknown Propositions can no otherwise be traced, but by means of some Connection they have with such as are known. Nay Reason itself, which is indeed the Art of Knowledge, and the Faculty by which we push on our Discoveries; yet by the very Definition of it implies no more, than an Ability of deducing unknown Truths, from Principles or Propositions that are already known. Now although this happy Choice of intermediate Ideas, so as to furnish a due Train of previous Propositions, that shall lead us successively from one Discovery to another, depends in some measure upon a natural Sagacity and Quickness of Mind; it is yet certain from Experience, that even here much may be effected, by a stubborn Application and Industry. In order to this it is in the first place necessary, that we have an extensive Knowledge of Things, and some general Acquaintance with the whole Circle of Arts and Sciences. Wide and extended Views add great Force and Penetration to the Mind, and enlarge its Capacity of judging. And if to this we join in the second place, a more particular and intimate Study of whatever relates to the Subject about which our Enquiries are employed, we seem to bid fair for Success in our Attempts. For thus we are provided with an ample Variety, out of which to chuse our intermediate Ideas, and are therefore more likely to discover some among them, that will furnish out the pre-

*A judicious
Choice of in-
termediate
Ideas, another
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Art.*

vious Propositions necessary in any Train of Reasoning.

Sagacity and a Quickness of Understanding greatly promoted by the Study of Algebra.

V. IT is not indeed to be denied, that when we have even got all our Materials about us, much still depends upon a certain Dexterity and Address, in singling out the most proper, and applying them skilfully for the Discovery of Truth. This is that Talent which is known by the Name of Sagacity, and commonly supposed to be altogether the Gift of Nature. But yet I think it is beyond Dispute, that Practice, Experience, and a watchful Attention to the Procedure of our own Minds while employed in the Exercise of Reasoning, are even here of very great Avail. It is a Truth well known to those who have made any considerable Progress in the Study of Algebra, that an Address and Skill in managing intricate Questions, may be very often obtained, by a careful Imitation of the best Models. For although when we first set about the Solution of Equations, we are puzzled at every Step, and think we can never enough admire the Sagacity of those who present us with elegant Models in that Way; yet by degrees we ourselves arrive at a great Mastery, not only in devising proper Equations, and coupling them artfully together, so as from the more complicated to derive others that are simple; but also in contriving useful Substitutions, to free our Calculations from Fractions, and those Intricacies that arise from Surds and irrational Quantities. Nor is it a small Pleasure attending the Prosecution of this Study, that we thus discern the growing Strength of our own Minds, and see ourselves approaching nearer and nearer to that Sagacity and Quickness of Understanding, which we so much admired in others, and were at first apt to conclude altogether beyond our Reach.

Where Art and Management are required in the Pursuit of Invention.

VI. WE have now considered those Requisites to Invention, that have their Foundation in the natural Talents of the Mind: An enlarged and comprehensive Understanding, a strong Habit of Attention, a Quickness and Sagacity in discerning and applying intermediate Ideas. Let us next take a View of such other Helps, as more immediately depend upon Art and Management, and shew the Address of the Mind, in contriving Means to facilitate its Discoveries, and free it from all unnecessary Fatigue and Labour. For we are to observe, that though the Capacity of the Intellect may be greatly enlarged by Use and Exercise, yet still our Views are confined within certain Bounds, beyond which a finite Under-

Understanding cannot reach. And as it often happens in the Investigation of Truth, especially where it lies at a considerable Distance from first Principles, that the Number of Connections and Relations are so great, as not to be taken in at once by the most improved Understanding; it is therefore one great Branch of the Art of Invention, to take account of these Relations as they come into View, and dispose of them in such manner, that they may always lie open to the Inspection of the Mind, when disposed to turn its Attention that Way. By this Means, without perplexing ourselves with too many Considerations at once, we have yet these Relations at Command, when necessary to be taken notice of in the Prosecution of our Discoveries: and the Understanding thus free and disengaged, can bend its Powers more intensely, towards that particular Part of the Investigation it is at present concerned with. Now in this, according to my Apprehension, lies the great Art of human Knowledge; to manage with Skill the Capacity of the Intellect, and contrive such Helps, as may bring the most wide and extended Objects within the Compass of its natural Powers. When therefore the Multitude of Relations increase very fast upon us, and grow too unwieldy to be dealt with in the Lump; we must combine them in different Classes, and so dispose of the several Parts, as that they may at all times lie open to the leisurely Survey of the Mind. By this means we avoid Perplexity and Confusion, and are enabled to conduct our Researches, without being puzzled with that infinite Crowd of Particulars, that frequently fall under our Notice in long and difficult Investigations. For by carrying our Attention successively from one Part to another, we can upon occasion take in the Whole; and knowing also the Order and Disposition of the Parts, may have recourse to any of them at Pleasure, when its Aid becomes necessary in the Course of our Enquiries.

VII. FIRST then I say, that an orderly Combination of Things, and classing them together with Art and Address, brings great and otherwise unmanageable Objects, upon a level with the Powers of the Mind. We have seen in the first Part of this Treatise, how by taking Numbers in a progressive Series, and according to an uniform Law of Composition, the most bulky and formidable Collections are comprehended with Ease, and leave distinct Impressions in the Understanding. For the several Stages of the Progression, serve as so many Steps to the Mind, by which it ascends gradually to the highest Combinations; and

An orderly Disposition of great Use in adapting Objects to the Capacity of the Understanding.

as it can carry its Views from one to another with great Ease and Expedition, it is thence enabled to run over all the Parts separately, and thereby rise to a just Conception of the Whole. The same thing happens in all our other complex Notions, especially when they grow very large and complicated; for then it is that we become sensible of the Necessity of establishing a certain Order and Gradation in the Manner of combining the Parts. This has been already explained at some Length in the Chapter of the Composition and Resolution of our Ideas, where we have traced the gradual Progress of the Mind through all the different Orders of Perception, and shewn, that the most expeditious Way of arriving at a just Knowledge of the more compounded Notices of the Understanding, is by advancing regularly through all the intermediate Steps. Hence it is easy to perceive, what Advantages must arise from a like Conduct, in regard to those several Relations and Connections, upon which the Investigation of Truth depends. For as by this means we are enabled to bring them all within the Reach of the Mind, they can each in their Turns be made use of upon occasion, and furnish their Assistance towards the Discovery of what we are in quest of. Now this is of principal Consideration in the Business of Invention, to have our Thoughts so much under Command, that in comparing Things together, in order to discover the Result of their mutual Connections and Dependence, all the several Lights that tend to the clearing the Subject we are upon, may lie distinctly open to the Understanding, so as nothing material shall escape its View: because an Oversight of this Kind in summing up the Account, must not only greatly retard its Advances, but in many Cases check its Progress altogether.

And in enabling us to proceed gradually and with Ease in the Investigation of Truth.

VIII. But secondly, another Advantage arising from this orderly Disposition is, that hereby we free the Mind from all unnecessary Fatigue, and leave it to fix its Attention upon any Part separately, without perplexing itself with the Consideration of the Whole. Unknown Truths, as we have already observed, are only to be traced, by means of the Relation between them and others that are known. When therefore these Relations become very numerous, it must needs greatly distract the Mind, were it to have its Attention continually upon the Stretch, after such a Multitude of Particulars at once. But now, by the Method of classing and ordering our Perceptions above explained, this Inconvenience is wholly prevented. For a just Distri-

Distribution of Things, as it ascertains distinctly the Place of each, enables us to call any of them into view at pleasure, when the present Consideration of it becomes necessary. Hence the Mind, proceeding gradually through the several Relations of its Ideas, and marking the Results of them at every Step, can always proportion its Enquiries to its Strength; and confining itself to such a Number of Objects, as it can take in and manage at ease, sees more distinctly all the Consequences that arise from comparing them one with another. When therefore it comes afterwards to take a Review of these its several Advances, as by this means the Amount of every Step of the Investigation is fairly laid open to its Inspection, by adjusting and putting these together in due Order and Method, it is enabled at last to discern the Result of the Whole. And thus, as before in the Composition of our Ideas, so likewise here in the Search and Discovery of Truth, we are fain to proceed gradually, and by a Series of successive Stages. For these are so many Resting-Places to the Mind, whence to look about it, survey the Conclusions it has already gained, and see what Helps they afford, towards the obtaining of others which it must still pass through, before it reaches the End of the Investigation. Hence it often happens, that very remote and distant Truths, which lie far beyond the Reach of any single Effort of the Mind, are yet by this progressive Method successfully brought to Light, and that too with less Fatigue to the Understanding, than could at first have well been imagined. For although the whole Process taken together, is frequently much too large to come within the View of the Mind at once; and therefore considered in that Light, may be said truly to exceed its Grasp: yet the several Steps of the Investigation by themselves, are often easy and manageable enough; so that by proceeding gradually from one to another, and thoroughly mastering the Parts as we advance, we carry on our Researches with wondrous Dispatch, and are at length conducted to that very Truth, with a View to the Discovery of which, the Inquiry itself was set on foot.

IX. BUT now perhaps it may not be improper, if we endeavour to illustrate these Observations by an Example, and set ourselves to trace the Conduct and Manner of the Mind, when employed in the Exercise of Invention. There are two great Branches of the Mathematics, peculiarly fitted to furnish us with Models in this Way: *Arithmetic* I mean, and *Algebra*. Algebra is univer-

*Algebra and
Arithmetic,
properly consid-
ered, both Arts
of Invention.*

sally

fully known to be the very Art and Principle of Invention ; and in Arithmetic too, we are frequently put upon the finding out of unknown Numbers, by means of their Relations and Connections with others that are known ; as where it is required to find a Number, equal to the Sum of two others, or the Product of two others. I chuse to borrow my Examples chiefly from the last Science, both because they will be more within the Reach of those, for whom this Treatise is principally designed ; as likewise, because Arithmetic furnishes the best Models of a happy Sagacity and Management, in classing and regulating our Perceptions. So that here more than in any other Branch of human Knowledge, we shall have an Opportunity of observing, how much an orderly Disposition of Things, tends to the Ease and Success of our Enquiries, by leaving us to canvass the Parts separately, and thereby rise to a gradual Conception of the Whole, without entangling ourselves with too many Considerations at once, in any single Step of the Investigation. For it will indeed be found, that a Dexterity and Address in the Use of this last Advantage, serves to facilitate and promote our Discoveries, almost beyond Imagination or Belief.

*The Method
of Classing our
Perceptions in
Arithmetic.*

X. WE have already explained the Manner of reducing Numbers into Classes, and of distinguishing these Classes by their several Names. And now we are farther to observe, that the present Method of Notation is so contrived, as exactly to fall in with the Form of numbering. For as in the Names of Numbers, we rise from *Units* to *Tens*, from *Tens* to *Hundreds*, from *Hundreds* to *Thousands*, &c. so likewise in their Notation, the same Figures, in different Places, signify these several Combinations. Thus 2 in the first Place on the right Hand denotes two *Units*, in the second Place it expresses so many *Tens*, in the third *Hundreds*, in the fourth *Thousands*. By this means it happens, that when a Number is written down in Figures, as every Figure in it expresses some distinct Combination, and all these Combinations together make up the total Sum ; so may the several Figures be considered as the constituent Parts of the Number. Thus the Number 2436 is evidently by the very Notation distinguished into four Parts, mark'd by the four Figures that serve to express it. For the first denotes two *Thousands*, the second four *Hundred*, the third *Thirty* or three *Tens*, and the fourth *Six*. These several Parts, though they here appear in a conjoined Form, may yet be also expressed separately thus, 2000, 400, 30 and 6, and the Account is exactly the same.

XI. THIS

XI. THIS then being the Case, if it is required to find a Number, equal to the Sum of two others given; our Business is, to examine separately these given Numbers; and if they appear too large and bulky to be dealt with by a single Effort of Thought, then, since the very Notation distinguishes them into different Parts, we must content ourselves with considering the Parts asunder, and finding their Sums one after another. For since the Whole is equal to all its Parts, if we find the Sums of the several Parts of which any two Numbers consist, we certainly find the total Sum of the two Numbers. And therefore, these different Sums, united and put together, according to the established Rules of Notation, will be the very Number we are in quest of. Let it be proposed, for instance, to find a Number equal to the Sum of these two: 2436 and 4352. As the finding of this by a single Effort of Thought, would be too violent an Exercise for the Mind; I consider the Figures representing these Numbers, as the Parts of which they consist, and therefore set myself to discover their Sums one after another. Thus 2 the first Figure on the right Hand of the one, added to 6 the first Figure on the right Hand of the other, makes 8, which is therefore the Sum of these two Parts. Again, the Sum of 5 and 3, the two Figures or Parts in the second Place, is likewise 8. But now as Figures in the second Place, denote not simple *Units*, but *Tens*; hence it is plain, that 5 and 3 here, signify five *Tens* and three *Tens*, or 50 and 30, whose Sum therefore must be eight *Tens*, or 80. And here again I call to mind, that having already obtained one Figure of the Sum, if I place that now found immediately after it, it will thereby stand also in the second Place, and so really express, as it ought to do, eight *Tens*, or 80. And thus it is happily contrived, that though in the Addition of *Tens*, I consider the Figures composing them as denoting only simple *Units*, which makes the Operation easier, and less perplexed; yet by the Place their Sum obtains in the Number found, it expresses the real Amount of the Parts added, taken in their full and complete Values. The same thing happens in summing the *Hundreds* and *Thousands*; that is, though the Figures expressing these Combinations, are added together as simple *Units*; yet their Sums standing in the third and fourth Places of the Number found, thereby really denote *Hundreds* and *Thousands*, and so represent the true Value of the Parts added.

*The Helps
thence derived
towards an
easy Addition
of Numbers.*

*Because in the
several Steps
by which it is
carried on, the
Mind is put to
little or no Fa-
tigue.*

XII. HERE then we have a manifest Proof, of the great Advantages derived from an artful Method of classing our Perceptions. For as the Numbers themselves are by this means distinguished into different Parts, which brings them more readily within the Compass of the Understanding; so by taking these Parts separately, the Operations about Numbers are rendered very easy and simple.

And indeed it is particularly worthy our Notice, that tho' in adding two very large Numbers together, the whole Process is of sufficient Length; yet the several Steps by which it is conducted, are managed with incredible Dispatch, and scarce any Fatigue to the Mind. This is apparent in the Example given above, where we see, that in every Advance from one Part to another, nothing more is required, than to add together the two Figures in the like Places of the Numbers to be summed. But what is yet more wonderful, tho' in the Progress of a long Operation, the Figures rise in their Value as we advance, and grow to signify *Thousands, Millions, Billions, &c.* yet so happily are they contrived for expressing the different Parts of Numbers, that in every Step of the Procedure, we consider them as denoting only simple Units, all other Deficiencies being made up by the Places their Sums obtain in the total Amount. And thus it is so ordered in this admirable Form of Notation, that however large the Numbers are that come under Examination, they are nevertheless managed with the same Ease as the most simple and obvious Collections; because in the several Operations about them, the Mind is neither tied down to the View of too many Parts at once, nor entangled with any Considerations regarding the Bulk and Composition of those Parts.

*This farther
illustrated by
an Example
in Multiplication.*

XIII. AND if these Advantages are so very manifest in the first and simplest Rules of Arithmetic, much more do they discover themselves in those that are intricate and complex. Let a Man endeavour in his Thoughts, to find the Product of two Numbers, each consisting of twenty or thirty Places, and that without considering the Parts separately; I believe he will soon be sensible, that it is a Discovery, far beyond the Limits of the human Mind. But now in the progressive Method above explained, nothing is more simple and easy. For if we take the first Figure on the left Hand of the one Number, and by it multiply every Figure of the other separately; these several Products connected according to the established Laws of Notation, must truly represent

present the total Product of this other, by that Part of the multiplying Number. Let us suppose, for instance, the Figure in the Unit's Place of the *Multiplier* to be 2, and the three last Places of the *Multiplicand* to be 432. Then, 2 multiplying 2 produces 4, which therefore is the first Part of the Product. Again, 2 multiplying 3 produces 6. But now 3 standing in the second Place of the *Multiplicand*, denotes in its real Value three *Tens*, or 30, which therefore taken twice, amounts to six *Tens*, or 60. And accordingly the Figure 6, coming after 4 already found, is thereby thrown into the second Place of the Product, and so truly expresses 60, its full and adequate Value. The same thing happens in multiplying 4, which standing in the Place of *Hundreds*, its Product by 2 is 800. But this very Sum the Figure 8, produced from 2 and 4, really denotes in the total Product. Because coming after 64, the two Parts already found, it is thereby determined to the third Place, where it of course expresses so many *Hundreds*. This Process, as is evident, may be continued to any Length we please; and it is remarkable, that in like manner as in Addition, tho' the Value of the Figures in the *Multiplicand* continually rises upon us, yet we all along proceed with them as simple Units; because the Places of the several Products in the total Amount, represent the just Result of multiplying the Figures together, according to their true and adequate Value.

XIV. HAVING thus obtained the Product by the first Figure of the Multiplier, we next take that in the second Place, and proceed with it in the same manner. This second Operation gives us the Effect of that Figure, considered as a simple Digit. But as it stood in the second Place, and therefore really denoted so many *Tens*, hence it is plain, that the Product now gained must be yet multiplied by *Ten*, in order to express the true Product sought. This is accordingly done in the Operation, by placing the first Figure of this second Product, under the second Figure of the first Product. For this when they come to be added together, has the same Effect as annexing a Cypher, or multiplying by *Ten*, as every one knows who is in the least acquainted with the Rules of Arithmetic. In like manner, when we multiply by the Figure in the third Place, as this new Product is placed still one Figure backwards, we do in Effect annex two Cyphers to it, or multiply it by a *Hundred*. And this we ought certainly to do; because having considered the multiplying Figure as denoting only simple Units,

Of the Disposition of the several Products in order to Addition.

when it really expressed so many Hundreds, the first Operation gives no more than the hundredth Part of the true Product. The Case is the same in multiplying by the fourth or fifth Figures, because the Products still running backwards, we thereby in effect annex as many Cyphers to them, as brings them up severally to their respective adequate Values. By this means it happens, that tho' the Figures of the Multiplier in every Advance, denote still higher and higher Combinations, yet we all along proceed with them as simple Digits; the Disposition of the several Products, in order to Addition, making up for all the Deficiencies that arise from this Way of considering them. When in this Method of Procedure, we have obtained the Product of the Multiplicand into all the different Parts of the Multiplier, by adding these Products together, we obtain also the total Product of the two Numbers. For since the Whole is equal to all its Parts, nothing is more evident, than that the Product of any one Number into another, must be equal to its Product into all the Parts of that other: and therefore the several partial Products united into one Sum, cannot but truly represent the real Product sought.

*Aritmetical
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teligible.*

XV. Thus we see, that in Questions of Multiplication, tho' the whole Process is sometimes sufficiently long and tedious, yet the several Steps by which it is carried on, are all very level to the Powers of the Understanding. For from the Account given above it appears, that nothing more is required in any of them, than barely to multiply one Digit by another. But now this easy Rule of Operation, is wholly derived from the before-mentioned Address in classing our Perceptions. For to this it is owing, that the Numbers under Consideration are distinguished into Parts, and that the several Parts are also clearly represented to the Mind, in the very Form of Notation. Now as these Parts have an invariable Relation one to another, and advance in their Value by an uniform Law of Progression; the Understanding, by means of such a Link, can easily hold them together, and carry its Views from Stage to Stage without Perplexity or Confusion. Hence it happens, that however large and mighty the Numbers are, so as far to exceed the immediate Grasp of the Mind; yet by running gradually thro' the several Combinations of which they are made up, we at length comprehend them in their full Extent. And because it would be impossible for the Understanding, to multiply very large Numbers one in-

II. Of METHOD.

163

ter, by a single Effort of Thought ; therefore here also
 ters the Parts separately, and taking them in an
 Series, advances by a Variety of successive Steps.
 re indeed in the Progress of the Operation the several
 rise in their Value : but this Consideration enters
 Work itself. For there, as we have already seen, tho'
 ders are taken as denoting only simple Units, yet
 er and Disposition of the partial Products, exhibits
 ording to its real Amount. Hence in every Step,
 only to multiply one Digit by another, which as it
 led with scarce any Difficulty, the whole Process is
 in with wondrous Dispatch. And thus by a Series
 Operations, we at length rise to Discoveries, which
 other Method of Procedure, would have been found
 beyond the Reach of the Mind.

SINCE therefore by a due and orderly
 on of our Ideas, we can bring the most
 id extended Objects, upon a level with
 ers of the Understanding : and since by
 ans also, we abridge the Fatigue and La-
 the Mind, and enable it to carry on its
 es in a progressive Method, without which
 nce, almost all the more remote and distant Truths
 iences, must have lain for ever hid from our
 lge; I think we may venture to affirm, that the
 regulating and classing our Perceptions, is the great
 nd Instrument of Invention. It is for this Reason
 ave endeavoured in so particular a Manner to illu-
 from Examples in Numbers ; because we have here
 a perfect Model of the Art itself, but see also in
 est manner, what Helps it furnishes, towards a
 mprehension of Objects, and a masterly Investiga-
 Truth. Nor let any one find fault, as if we had
 rather too long upon Matters that are obvious and
 o all. For I am apt to think, that tho' very few
 gers to the received Method of Notation, and the
 Rules of Operation in Arithmetic ; yet it is not
 e that sets himself to consider the Address and Saga-
 may be seen in the Contrivance of them, or to
 hese Principles of Investigation, which we have here
 deduced from them. And this I take to be the
 hat we sometimes meet with Instances of Men, who
 oughly versed in the Art of Invention, with regard
 rticular Branches of Knowledge ; yet if taken our
 usual Track, find themselves immediately at a Stand.

*The Art of
 classing our
 Perceptions,
 the great
 Mean and In-
 strument of
 Invention.*

as if wholly bereft of Genius and Penetration. With such Men Invention is a mere Habit, carried on in a Manner purely mechanical, without any Knowledge of the Grounds and Reasons, upon which the several Rules of Investigation are founded. Hence they are unfurnished with those general Observations, which may be alike usefully applied in all Sciences, with only some little necessary Variations, suited to the Nature of the Subject we are upon. And indeed I know of no surer Way to arrive at a fruitful and ready Invention, than by attending carefully to the Procedure of our own Minds, in the Exercise of this distinguishing Faculty; because from the particular Rules relating to any one Branch, we are often enabled to derive such general Remarks, as tend to lay open the very Foundation and Principles of the Art itself.

*The Manner
of proceeding
in the Resolu-
tion of Alge-
braic Equa-
tions.*

XVII. IF now we turn our Thoughts from *Arithmetic* to *Algebra*, here also we shall find, that the great Art of Invention lies, in so regulating and disposing our Notices of Things, that we may be enabled to proceed gradually in the Search of Truth. For it is the principal Aim of this Science, by exhibiting the several Relations of Things in a kind of symbolical Language, so to represent them to the Imagination, as that we may carry our Attention from one to another, in any Order we please. Hence, however numerous those Relations are, yet by taking only such a Number of them into Consideration at once, as is suited to the Reach and Capacity of the Understanding, we avoid Perplexity and Confusion in our Researches, and never put our Faculties too much upon the Stretch, so as to lose ourselves amidst the Multiplicity of our own Thoughts. As therefore in *Arithmetic*, we rise to a just Conception of the greatest Numbers, by considering them as made up of various progressive Combinations; so likewise in *Algebra*, those manifold Relations that often intervene, between known and unknown Quantities, are clearly represented to the Mind, by throwing them into a Series of distinct Equations. And as the most difficult Questions relating to Numbers are managed with Ease, because we can take the Parts or Figures separately, and proceed with them one after another; so also the most intricate Problems of *Algebra* are in like manner readily unfolded, by examining the several Equations apart, and unravelling them according to certain established Rules of Operation. And here it is well worth our Notice, that in very complicated Problems, producing a great Number

Number of different Equations, it for the most part so happens, that every one of them includes a Variety of unknown Quantities. When therefore we come to solve them separately, as it would too much distract and entangle the Mind, to engage in the Pursuit of so many different Objects at once; our first Business is, by artfully covering the several Equations together, or by the various Ways of Multiplication, Subtraction, Addition, and Substitution, to derive others from them more simple, until at length by such a gradual Process, we arrive at some new Equation, with only one unknown Quantity. This done, we set ourselves to consider the Equation last found, and having now to do with an Object suited to the Strength and Capacity of the Mind, easily by the established Rules of the Art discover the Quantity sought. In this manner we proceed with all the several unknown Quantities one after another, and having by a Series of distinct Operations traced them separately, the Question is thereby completely resolved.

XVIII. HENCE it appears, that the Business of Invention as practised in Algebra, depends entirely upon the Art of abridging our Thoughts, reducing the Number of Particulars taken under Consideration at once to the fewest possible, and establishing that progressive Method of Investigation, which we have already so fully explained from Examples in Arithmetic. I might easily shew, that the same Observation holds equally in other Sciences; but having already exceeded the Bounds I at first prescribed to myself in this Chapter, shall only add, that besides the grand Instruments of Knowledge already mentioned, there are innumerable other Artifices, arising out of the particular Nature of the Subject we are upon, and which may be considered as subsidiary Helps to Invention. Thus in Geometry, many Demonstrations of Problems and Theorems are wholly derived from the Construction of the Figure made use of, and the drawing of Lines from one Point to another. In like manner in Algebra, the devising of proper Equations from the Conditions of the Question proposed, and contriving neat Expressions for the unknown Quantities, contribute not a little to the easy Solution of Problems. And when we have even carried on the Investigation to some such Equation with only one unknown Quantity; as that unknown Quantity may be variously perplexed and entangled with others that are known, so as to require a Multiplicity of different Operations, before it can be disengaged, which often involves

*of this latter
Artifices
which may be
conceived as
subsidiary
Helps to In-
vention.*

us in long and intricate Calculations, and brings Surds and irrational Quantities in our Way; Algebrists, to prevent in some measure these Inconveniencies, and shorten as much as possible the Process, have fallen upon several Methods of Substitution, which are of great Service in very complicated Questions. But these and such like Artifices of Invention, cannot be explained at length in this short Essay. It is enough to have given the Reader a Hint of them, and put him in the way of unravelling them himself, when he comes to apply his Thoughts to those particular Branches of Knowledge where they are severally made use of.

XIX. THERE is one thing however, that in a particular manner deserves to be taken notice of, before we dismiss this Subject; and that is, the great Advantages that may redound to Science, by a happy Notation or Expression of our Thoughts. It is owing entirely to this, and the Method of denoting the several Combinations of Numbers by Figures standing in different Places, that the most complicated Operations in Arithmetic are managed with so much Ease and Dispatch. Nor is it less apparent, that the Discoveries made by Algebra, are wholly to be imputed to that symbolical Language made use of in it. For by this means we are enabled to represent the Relations of Things in the Form of Equations, and by variously proceeding with these Equations, to trace out Step by Step, the several Particulars we are in quest of. Add to all this, that by such a Notation, the Eyes and Imagination are also made subservient to the Discovery of Truth. For the Thoughts of the Mind rise up and disappear, according as we set ourselves to call them into view; and therefore, without some particular Method of fixing and ascertaining them as they occur, the retrieving them again when out of sight, would often be no less painful, than the very first Exercise of deducing them one from another. When therefore in the Pursuit of Truth, we carry our Attention forward from one Part of the Investigation to another, as nevertheless we have frequent occasion to look back upon the Discoveries already passed through, could these be no otherwise brought into view, than by the same Course of thinking in which they were first traced, so many different Attentions at once, must needs greatly distract the Mind, and be attended with infinite Trouble and Fatigue. But now, the Method of fixing and ascertaining our Thoughts by a happy and well-chosen Notation, entirely removes all these Obstacles. For thus,

Of the great Advantages arising from a happy Notation or Expression of our Thoughts.

en we have occasion to turn to any former Discover-
 as Care is taken all along to delineate them in pro-
 Characters, we need only cast our Eye upon that Part
 the Process where they stand expressed, which will lay
 m at once open to the Mind in their true and genuine
 nat. By this means we can at any time take a quick and
 dy Survey of our Progress, and running over the several
 occlusions already gained; see more distinctly what Helps they
 with towards the obtaining of those others we are still in
 sit of. Nay farther, as the Amount of every Step of
 Investigation lies fairly before us, by comparing them va-
 ally among themselves, and adjusting them one to another,
 come at length to discern the Result of the whole, and
 enabled to form our several Discoveries into an uniform
 well-connected System of Truths, which is the great
 d and Aim of all our Enquiries.

XX. UPON the whole then it appears, that
 order to proceed successfully in the Exercise
 Invention, we must endeavour as much as
 Recapitula-
 tion.
 sible to enlarge the Capacity of the Mind, by accustom-
 ing it to wide and comprehensive Views of Things: that we
 ist habituate ourselves to a strong and unshaken Attention,
 ich carefully distinguishes all the Circumstances that come
 our Way, and lets nothing material slip its Notice: In
 ;, that we must furnish ourselves with an ample Variety
 intermediate Ideas, and be much in the Exercise of singling
 m out and applying them for the Discovery of Truth.
 ese preparatory Qualifications obtained, what depends upon
 t lies chiefly in the Manner of combining our Perceptions,
 l classing them together with Address, so as to establish
 rogressive Method of Investigation. And here it is of
 at Importance, to contrive a proper Notation or Ex-
 sion of our Thoughts, such as may exhibit them accord-
 to their real Appearance in the Mind, and distinctly
 resent their several Divisions, Classes, and Relations. This
 clearly seen in the Manner of computing by Figures in
 thmetic, but more particularly in that symbolical Lan-
 ge, which hath been hitherto so successfully applied in
 avelling of Algebraical Problems. Thus furnished, we may
 ny time set about the Investigation of Truth; and if we
 e care to note down the several Steps of the Process, as

Mind advances from one Discovery to another, such an
 angement or Disposition of our Thoughts, constitute
 at is called the *Method of Invention*. For thus it is plain
 t we follow the natural Procedure of the Understanding,

and make the Truths we have unravelled, to succeed one another, according to the Order in which they present themselves to the Mind, while employed in tracing and finding them out. And here again it well deserves our Notice, that as by this means the whole Investigation lies distinctly before us; so by comparing the several Steps of it among themselves, and observing the Relation they bear one to another, we are enabled to form our Discoveries into a regular System of Knowledge, where the Truths advanced are duely linked together, and deduced in an orderly Series from first Principles. This other Manner of combining our Thoughts, is distinguished by the Name of the *Method of Science*, which therefore now offers itself to be explained, and is accordingly the Subject of the ensuing Chapter.

C H A P. III.

Of the Method of Science.

As the Ideas, as derived from the Contemplation of our Ideas, of a necessary and unchangeable Nature.

I. **I**N order to give the juster Idea of the Rules peculiar to this Species of Method, and establish them upon their proper Foundation, it will be necessary to begin with settling the Meaning of the Word *Science*, and shewing to what Parts of human Knowledge that Term may be most fitly applied. We have already observed in the first Chapter of the second Book, that there are three several Ways of coming at the Knowledge of Truth. First, by contemplating the Ideas in our own Minds. Secondly, by the Information of the Senses. Thirdly, by the Testimony of others. When we set ourselves to consider the Ideas in our own Minds, we variously compare them together, in order to judge of their Agreement or Disagreement. Now as all the Truths deduced in this Way, flow from certain Connections and Relations, concerned between the Ideas themselves; and as when the same Ideas are brought into Comparison, the same Relations must ever and invariably subsist between them; hence it is plain, that the Knowledge acquired by the Contemplation of our Ideas, is of a necessary and unchangeable Nature. But farther, as these Relations between our Ideas, are not only supposed to be real in themselves, but also to be seen and discerned by the Mind; and

as

as when we clearly perceive a Connection or Repugnance between any two Ideas, we cannot avoid judging them to agree or disagree accordingly; it evidently follows that our Knowledge of this Kind is attended with absolute Certainty and Conviction, insomuch that it is impossible for us to withhold our Assent, or entertain any Doubt as to the Reality of Truths so offered to the Understanding. The Relation of Equality between the Whole and all its Parts, is apparent to every one, who has formed to himself a distinct Notion of what the Words *Whole* and *Part* stand for. No Man therefore, who has these two Ideas in his Mind, can possibly doubt of the Truth of this Proposition, *that the Whole is equal to all its Parts*. For this would be only endeavouring to persuade himself, that that was not, which he plainly and unavoidably perceives to be. So that in all Cases where we discern a Relation between any of our Ideas, whether immediately by comparing them one with another, or by means of intermediate Ideas, that lay it open distinctly to the Understanding; the Knowledge thence arising is certain and infallible. I say infallible; because we not only perceive and own the Truth of Propositions so offered to the Mind, but having at the same time a clear View of the Ground on which our Assent rests, are entirely satisfied within ourselves, that we cannot possibly be deceived in this Perception.

II. THE second Way of coming at Knowledge is by means of the Senses. From them we receive Information of the Existence of Objects without us, of the Union and Conjunction of different Qualities in the same Subject, and of the Operations of Bodies one upon another. Thus our Eyes tell us, that there is in the Universe such a Body as we call the Sun; our Sight and Touch, that Light and Heat, or at least the Power of exciting those Perceptions in us, co-exist in that Body; and lastly, by the same Sight we also learn, that Fire has the Power of dissolving Metals, or of reducing Wood to Charcoal and Ashes. But now with regard to this Kind of Knowledge we are to observe, that though when the Organs of the Body are rightly disposed, and operate in a natural Way, we never doubt the Testimony of our Senses, but form most of the Schemes of Life upon their Information; yet are not the Truths of this Class attended with that absolute and infallible Assurance, which belongs to those derived from the Contemplation of our own Ideas. We find that the Senses frequently represent Objects as really existing, which yet

As flowing from the Information of the Senses, he gets undoubted Assurance, but excludes not all Possibility of being deceived.

yet have no Being but in our own Imaginations; as in Dreams, Phrensies, and the Deliriums of a Fever. A Disorder too in the Organs, makes us often ascribe Qualities to Bodies, entirely different from those they appear to possess at other times. Thus a Man in the Jaundice shall fancy every Object presented to him yellow; and in bodily Distempers, where the Taste is greatly vitiated, what naturally produces the Idea of Sweetness, is sometimes attended with a quite contrary Sensation. It is true, these Irregularities neither ought, nor indeed do they with considerate Men in any ways tend, to discredit the Testimony of Experience. He that awakes, in his Senses, and satisfied that his Organs operated duly, should take it into his Head to doubt, whether Fire would burn, or Arsenic poison him, and therefore rashly venture upon these Objects, would soon be convinced of his Error, in a Way not much to his liking. As nevertheless the Senses do sometimes impose upon us, there is no absolute and infallible Security that they may not at others; and therefore the Assurance they produce, though reasonable, satisfying, and sufficiently well founded to determine us in the several Actions and Occurrences of Life, is yet of such a Nature, as not necessarily to exclude all Possibility of being deceived. Hence some Men go so far as to maintain, that we ought to distrust our Senses altogether: Nay, whole Sects among the Ancients, because of this bare Possibility, which really extends no farther than to Matters of *Experience* and *Testimony*, yet establish it as a Principle, that we ought to doubt of every thing. Nor are there wanting Philosophers among the Moderns, who upon the same Grounds deny the Existence of Bodies, and ascribe the Perceptions excited in us, not to the Action of external Matter, but to certain established Laws in Nature, which operate upon us in such manner, as to produce all those several Effects, that seem to flow from the real Presents of Objects variously affecting our Perception. It is not my Design here to enter into a particular Discussion of these Matters; all I aim at is to shew, that the Testimony of the Senses, though sufficient to convince sober and reasonable Men, yet does not so unavoidably extort our Assent, as to leave no room for Suspicion or Distrust.

As founded upon Testimony, is of a still more uncertain Nature, tho' in many Cases mistaken.

III. THE third and last Way of coming at Truth is, by the Report and Testimony of others. This regards chiefly past Facts and Transactions, which having no longer any Existence, cannot be brought within the present Sphere of our Observation. For as these could never have
fallen

under our Cognizance, but by the Relation of such as had sufficient Opportunities of being informed; it is hence apparent, that all our Knowledge of this Kind, is wholly founded upon the Consistency of Testimony. But now, although this in many Cases is sufficient Ground of Assent, so as to produce a ready Belief in the Mind, yet it is liable to still greater Objections, even the Reports of Experience. Our Senses, it is true, on some Occasions deceive us, and therefore they may possibly deceive others. But this bare Possibility creates little or no Doubt; because there are fixed Rules of judging, when they operate according to Nature, and when they are perverted or given up to Caprice. It is otherwise in Matters of human Testimony. For there, besides the Supposition that the Persons themselves may have been deceived, there is another Possibility, that they may have conspired to impose upon others by a false Relation. This Consideration has great Weight, as we frequently meet with such Instances of Dissimulation among Men, and know it to be their Interest in some particular Cases, to dissemble and misrepresent Truth. It would nevertheless be the Height of Folly, to reject all human Testimony without Distinction, because of this bare Possibility. Who can doubt whether there ever was in the World such Conquerors as *Alexander* and *Julius Cæsar*? There is no absolute Contradiction indeed in supposing that Historians may have conspired to deceive us. But an universal Concurrence to a Falshood, without one dissenting Voice, is so extremely improbable, and so very different from what usually happens in the World, that a wise Man will not as soon persuade himself to believe the grossest Absurdity, as to admit of a Supposition so remote from every Appearance of Truth. Hence the Facts of History, when well attested, are readily embraced by the Mind; and though the Evidence attending them be not such, as produces a necessary infallible Assurance, it is yet abundantly sufficient to justify our Belief, and leave those without Excuse, who upon the bare Possibility of Dissimulation, are for rejecting entirely the Conveyance of Testimony.

UPON the whole then it appears, that absolute Certainty, such as is attended with unshaken Assent, and excludes all Possibility of being deceived, is to be found only in the Contemplation of our own Ideas. In Matters of Experience and Testimony, Men we see may frame Pretences for Suspicion and Distrust: But in that of Knowledge which regards the Relations

without wavering or Distrust.

Science is entirely settled by the Evidence of Knowledge, which is derived from the Contemplation of our Ideas.

of our Ideas, none such can have place. For as all these several Relations are either immediately discerned by the Mind, or traced by means of intermediate Ideas, where Self-evidence is supposed to accompany every Step of the Procedure, it is absolutely impossible for a Man to persuade himself that that is not, which he plainly and necessarily perceives to be. Now it is to Knowledge attended with this last Kind of Evidence alone, that in Strictness and Propriety of Speech we attribute the Name of *Science*. For *Science* implies Perception and Discernment, what we ourselves see, and cannot avoid seeing; and therefore has place only in Matters of absolute Certainty, where the Truths advanced are either intuitive Propositions, or deduced from them in a Way of strict Demonstration. And as this Kind of Certainty is no where to be found, but in investigating the Relations of our Ideas; hence it is plain, that *Science*, properly speaking, regards wholly the first Branch of human Knowledge; that which we have said is derived from a Contemplation of the Ideas in our own Minds.

Our Knowledge of the real Existence of Objects not intuitive.

V. BUT here I expect it will be asked, if *Science* and *Demonstration* belong only to the Consideration of our own Ideas, what Kind of Knowledge is it that we have relating to Bodies, their Powers, Properties, and Operations one upon another? To this I answer, that we have already distinguished it by the Name of *Natural* or *Experimental*. But that we may see more distinctly wherein the Difference between *Scientific* and *Natural* Knowledge lies, it may not be improper to add the following Observations. When we cast our Eyes towards the Sun, we immediately conclude, that there exists an Object without us, corresponding to the Idea in our Minds. We are however to take notice, that this Conclusion does not arise from any necessary and unavoidable Connection discerned, between the Appearance of the Idea in the Mind, and the real Existence of the Object without us. We all know by Experience, that Ideas may be excited, and that too by a seeming Operation of Objects upon our Senses, when there are in fact no such Objects existing; as in Dreams, and the Deliriums of a Fever. Upon what then is the before-mentioned Conclusion properly grounded? Why evidently upon this: That as we are satisfied our Organs operate duely, and know that every Effect must have a Cause, nothing is more natural than to suppose, that where an Idea is excited in the Mind, some Object exists corresponding to the Idea, which is the Cause of

of that Appearance. But as this Conclusion, by what we have seen, is not necessary and unavoidable, hence there is no *Intuition* in the Case, but merely a probable Conjecture, or reasonable Presumption, grounded upon an intuitive Truth.

VI. AGAIN, when a Piece of Gold is dissolved in *Aqua Regia*, we see indeed and own the Effect produced, but cannot be said in Strictness and Propriety of Speech to have any Perception or Discernment of it. The Reason is, because being unacquainted with the intimate Nature both of *Aqua Regia* and Gold, we cannot from the Ideas of them in our Minds deduce, why the one must operate upon the other in that particular Manner. Hence it is, that our Knowledge of the Facts and Operations of Nature, extends not with Certainty beyond the present Instance, or what falls under our immediate Notice; so that in all our Researches relating to them, we must ever proceed in the Way of Trial and Experiment, there being here no general or universal Truths, whereon to found *Scientifical* Deductions. Because the Solution of Gold in *Aqua Regia* holds in one Experiment, we cannot thence infallibly conclude that it will hold in another. For not knowing upon what it is in either of these Bodies, that the Effect here mentioned depends, we have no absolute Certainty in any new Experiment we propose to make, that the Objects to be applied one to another, have that precise Texture and Constitution, from which this Solution results. Chemists know by Experience, that Bodies which go by the same Name, and have the same outward Appearance, are not always however exactly alike in their Powers and Operations. In vain do they often search for those Properties in one Piece of *Antimony*, which on former Occasions they may have found in another; and by this means, to their no small Mortification, find themselves frequently disappointed, in very costly and promising Experiments. Nor have we any express and positive Assurance, that the very Bodies with which we have formerly made Experiments, continue so exactly the same, as to afford the like Appearances in any succeeding Trial. A thousand Changes happen every Moment in the natural World, without our having the least Knowledge or Perception of them. An Alteration in our Atmosphere, the Approach or Recess of the Sun, his Declination towards the North or South, not only vary the outward Face of Things, but occasion many Changes in the human Constitution itself, which we yet perceive not when they hap-

Absolute Certainty in natural Knowledge confined to what falls under our immediate Notice.

pen; nor should ever be sensible of, but by the Effects and Consequences resulting from them. And whether Alterations analogous to these, may not sometimes be produced in the Frame and Texture of many of those Bodies that surround us, is what we cannot with Certainty determine. Hence from an Experiment's succeeding in one Instance, we cannot infallibly argue that it will succeed in another, even with the same Body. The Thing may indeed be probable, and that in the highest Degree; but as there is still a Possibility that some Change may have happened to the Body, unknown to us, there can be no absolute Certainty in the Case.

What Kind of
Knowledge of
Bodies would
depend on the
Name of Sci-
ence.

VII. HAD we such an intimate Acquaintance with the Structure both of *Aqua Regia* and Gold, as to be able thence to discern, why the one so operates upon the other as to occasion its Dissolution, inasmuch that from the Ideas of them in our own Minds we could clearly deduce, that Bodies of such a Make applied one to another, must necessarily produce the Effect here mentioned; our Knowledge would then be *Scientific*, and stand upon the Foundation either of *Intuition* or *Demonstration*, according as the Perception was immediate, or attained by means of intervening Ideas. In this Case therefore, having two standard Ideas in our Minds, whose Relations we perfectly well know; wherever we found Objects conformable to these Ideas, we could then pronounce with Certainty, that the Application of them one to another would be attended with the above Effect: Because whatever is true in Idea, is unavoidably so also in the Reality of Things, where Things exist answerable to these Ideas. If it be true in Idea, that a Parallelogram is the double of a Triangle, standing upon the same Base, and between the same Parallels; the same will be true of every real Triangle and Parallelogram, that exist with the Conditions here mentioned. We are likewise to observe, that the Changes to which Bodies are daily liable, could produce no Confusion or Perplexity in natural Knowledge, did it stand upon the Foundation here mentioned. For in such a Case, the Powers and Properties of Objects being deduced from the Ideas of them in our own Minds, would no otherwise be applied to Things really existing, than as these Things were found perfectly conformable to our Ideas. When therefore an Alteration happened in any Body, as it would by this means differ from that standard Idea, whence its former Properties were seen to flow, we must of course be sensible, that some suitable Change would follow in the Properties themselves, and that its



III. Of METHOD.

175

vers and Operations in regard of other Bodies, would in all respects the same.

BUT what is still more remarkable, we upon this Supposition be able to determine mutual Action and Influence of Bodies, without recourse to Trial or Experiment.

Experience the only Foundation of natural Knowledge.

For instance a perfect Knowledge of the Nature and Composition of an animal Body, and of particular Poison that is infused into it by the Bite of a

so as clearly and distinctly to discern how they are one to another; we might thence scientifically determine without the Help of Experiments, that the Bite of a would so unhinge the human Fabric, and produce fermentations and Combustions in it, as must necessarily be followed by a total Extinction of all the vital Functions, and that admirable Machine a mere lifeless Lump. But as

perfect and adequate Ideas of Objects, and their mutual dependence one to another, are plainly beyond the reach of present Faculties, it were vain for us to think of improving natural Knowledge by abstract Reasoning, or scientific deductions. Experience is here the true and proper foundation of our Judgments, nor can we by any other way arrive at a Discovery of the several Powers and Properties of Bodies. How long might a Man contemplate the

of Hemlock, examine the Structure of its Parts in a microscope, and torture and analyse it by all the Processes of Chemistry, before he could pronounce with Certainty that it will have upon a human Body? One single Experiment lays that open in an Instant, which all the Wit and Reason of Men would never of themselves have been able to trace. The same holds in all the other Parts of

Philosophy. Our Discoveries relating to Electricity, the Powers and Properties of the Load-stone, the Force of the Magnet, &c. were not gained by Reasoning, or the deduction of our abstract Ideas, but by means of Experiments made with the Bodies themselves. Hence it happens

that while the Philosophy of Aristotle prevailed in the World, which dealt much in metaphysical Notions, occult Qualities, Sympathies, Antipathies, and such like Words without Meaning; the Knowledge of Nature was at a stand: Men pretended to argue abstractedly about Things, which they had no perfect and adequate Ideas, whereon they used such a Method of Reasoning. But now in the present Age, that we have returned to the Way of Trial and Experiment, which is indeed the only true Foundation

of natural Philosophy; great Advances have already been made, and the Prospect of still greater lies before us.

Difference between scientific and natural Knowledge.

IX. AND thus at length we may sufficiently understand wherein the proper Difference lies, between scientific and natural Knowledge. In Matters of Science we argue from the Ideas in our own Minds, and the Connections and Relations they have to one another. And as when these Relations are set clearly and plainly before us, we cannot avoid perceiving and owning them, hence all the Truths of this Class produce absolute Certainty in the Mind, and are attended with a necessary and unavoidable Assent. It is otherwise in the Case of natural Knowledge. Intuition and inward Perception have here no Place. We discern not the Powers and Properties of those Objects that surround us, by any View and Comparison of the Ideas of them one with another, but merely by Experience, and the Impressions they make on the Senses. But now the Reports of Sense happening in some Instances to deceive us, we have no infallible Assurance that they may not in others; which weakens not a little the Evidence attending this kind of Knowledge, and leaves room for Suspicion and Distrust. Nay, what is yet more considerable, as we have no perfect and adequate Ideas of Bodies, representing their inward Constitution, or laying open the Foundation upon which their Qualities depend, we can form no universal Propositions about them, applicable with Certainty in all particular Instances. Fire, we say, dissolves Metals. This, though expressed indefinitely, is however only a particular Truth, nor can be extended with absolute Assurance, beyond the several Trials made. The Reason is, that being ignorant of the inward Frame and Composition both of Fire and Metals; when Objects are offered to us under that Name, we have therefore no positive Certainty, that they are of the very Make and Texture requisite to the Success of the Experiment. The Thing may indeed be probable in the highest Degree, but for want of standard and settled Ideas, we can never arrive at a clear and absolute Perception in the Case.

The Manner of Reasoning in natural Knowledge.

X. As nevertheless it is certain, that many general Conclusions in natural Philosophy, are embraced without Doubt or Hesitation, nay, that we form most of the Schemes and Pursuits of Life upon that Foundation; it will naturally be asked here, how come we by this Assurance? I answer, not scientifically, and in the way of strict Demonstration, but



III. Of METHOD.

177

Analogy, and an Induction of Experiments. We distinguish Fire, for instance, by such of its Qualities, as lie more immediately open to the Notice of the Senses; among which and Heat are the most considerable. Examining still into its Nature, we find it likewise possessed of the Power of dissolving Metals. But this new Property not having any necessary Connection that we can trace, with those Qualities by which Fire is distinguished, we cannot therefore with Certainty, that where-ever Light and Heat, &c. Power of dissolving Metals co-exists with them. 'Tis

after we have tried the thing in a Variety of Experiments and found it always to hold, that we begin to presume there may be really some such Connection, tho' our Views are not so clear and imperfect to discover it. Hence we are led to a general Conclusion, arguing from what has already happened, to what will happen again in the like Cases; in short, that where we meet with all the other Properties of Fire together, we have not the least Doubt, but that upon the Power above-mentioned will be found to belong to it.

This is called Reasoning by *Analogy*; and it is, as we depend entirely upon Induction, and Experiments made upon particular Objects: the more precise and accurate our Observations of these Objects are, and the greater the Variety of Experiments upon which we build our Reasoning, the more certain and undoubted will the Conclusions be. 'Tis in this manner we arrive at all the general Truths of natural Knowledge, as that the Bite of certain Animals is mortal; that a Load-stone points to the North; that Gravity belongs universally to all Bodies; and innumerable others which tho' not capable of strict Demonstration, are as easily as readily embraced upon the Foundation of Analogy, the most obvious and intuitive Judgments; nay and fixed and steady Principles of Action, in all the Affairs of Life.

AND here again it is particularly remarkable, that having ascertained the general Properties of Things by Analogy, if we proceed next to establish these as *Postulata* in Philosophy, we may upon this Foundation build strict and Mathematical

How even scientific Reasoning may be introduced into it.

Demonstrations, and thereby introduce *scientific* Reasoning into natural Knowledge. In this manner Sir Isaac Newton, having determined the Laws of Gravity by a Variety of Experiments, and laying it down as a Principle, that it is according to those Laws thro' the whole System of the World, has thence in a Way of strict Demonstration deduced the whole Theory of the heavenly Motions. For granting

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once this *Postulatum*, that Gravity belongs universally to all Bodies, and that it acts according to their solid Content, decreasing with the Distance in a given Ratio; what Sir *Isaac* has determined in regard to the Planetary Motions, follows from the bare Consideration of our own Ideas; that is, necessarily and *scientifically*. Thus likewise in *Optics*, if we lay it down as a Principle, that Light is propagated on all Sides in right Lines, and that the Rays of it are reflected and refracted, according to certain fixed invariable Laws, all which is known to be true by Experience; we can, upon this Foundation, establish Mathematically the Theory of Vision. The same happens in *Mechanics*, *Hydrostatics*, *Pneumatics*, &c. where from *Positivata* ascertained by Experience, the whole Theory relating to these Branches of Knowledge, follows in a Way of strict Demonstration. And this I take to be the Reason, why many Parts of Natural Philosophy, are honoured with the Name of *Sciences*. Not that they are ultimately founded upon Intuition; but that the several Principles peculiar to them, being assumed upon the Foundation of Experience, the Theory deduced from these Principles, is established by *scientific* Reasoning.

*It still Ex-
perience is the
ultimate
Ground of our
Assent.*

XII. COULD we indeed discern any necessary Connection, between Gravity and the known essential Qualities of Matter, inasmuch that it was inseparable from the very Idea of it; the whole Theory of the Planetary Motions, would then be strictly and properly *scientific*. For seeing from the Notion of Gravity, we can demonstratively determine the Laws, that Bodies will observe in their Revolutions, in any known Circumstances; if the Circumstances relating to any System of Bodies can be traced, and Gravity is supposed essential to them, we can then, from the bare Consideration of our own Ideas, deduce all their Motions and Phenomena. Now this is precisely what Sir *Isaac* has done in regard to our Planetary System. He has determined the Circumstances of the Bodies that compose it, in respect of Situation, Distance, Magnitude, &c. all which being supposed, if they are essentially actuated by Gravity, their several Revolutions and Appearances must be equally essential. But as the Principle of Gravitation cannot be accounted for by the known Qualities of Matter, neither can this Theory be immediately deduced from the Idea of Body; and therefore, tho' our Reasoning in this Part of Philosophy be truly *scientific*, yet as the Principle upon which that Reasoning is grounded, is derived from Experience, the Theory itself must needs ultimately rest upon the same Foundation. And thus even the

Doctrine



Chap. III. Of METHOD. 179

Doctrine of the Planetary Motions, tho' seemingly established by Mathematical Reasoning, falls yet in Strictness and Propriety of Speech, under the Head of Natural Knowledge. For in this precisely consists the Difference between *Science*, and what we call the Philosophy of *Nature*; that the one is founded ultimately on *Intuition*, the other on *Experience*. As the Observation here made, holds alike in all the other Branches of Natural Philosophy, into which *scientific* Reasoning has been introduced; it is hence apparent, that they are not *sciences* in the strict and proper Sense of the Word, but only by a certain Latitude of Expression, common enough in all languages. What we have therefore said above, relating to the Impossibility of improving Natural Knowledge by scientific Deductions, is not contradicted by any thing advanced in this section. We there meant Deductions grounded ultimately on intuition, and derived from a Consideration of the abstract Ideas of Objects in our own Minds; not such as flow from *Postulata* assumed upon the Foundation of Experience. For these last, as we have already observed, are not truly and properly scientific, but have obtained that Name, merely on account of the Way of Reasoning, in which they are collected from the said *Postulata*.

XIII. If then absolute and infallible Certainty is not to be obtained in Natural Knowledge, much less can we expect it in Historical. For here Testimony is the only Ground of Assent, and therefore the Possibility of our being deceived, is still greater than in the Case of Experience. Not only he who reports the Fact may himself have formed a wrong Judgment; but could we even get over this Scruple, there is still room to suspect, that he may aim at imposing upon us by a false Narration. In this Case therefore it is plain, there can be no Intuition or inward Perception of Truth, no strict and absolute Demonstration, and consequently no *Science*. There is however a Way of Reasoning even here, that begets an entire Acquiescence, and leads us to embrace without wavering, the Facts and Reports of History. If for instance it appears, that the Historian was a Man of Veracity; if he was a competent Judge of what he relates; if he had sufficient Opportunities of being informed; if the Book that bears his Name was really writ by him; if it has been handed down to us uncorrupted; in fine, if what he relates is probable in itself, falls in naturally with the other Events of that Age, and is attested by contemporary Writers. By these and such like Arguments, founded partly on Criticism, partly on probable Conjecture, we judge of past Transactions; and though they

*The Manner
of Reasoning
in Historical
Knowledge.*

are not capable of *scientific* Proof, yet in many Cases we arrive at an undoubted Assurance of them. For as it is absurd to demand Mathematical Demonstration in Matters of Fact, because they admit not of that Kind of Evidence; it is no less so to doubt of their Reality, when they are proved by the best Arguments their Nature and Quality will bear.

Scepticism necessarily excluded from Matters of Science.

XIV. AND thus we see in the several Divisions of human Knowledge, both what is the Ground of Judging, and the Manner of Reasoning, peculiar to each. In *Scientific* Knowledge, which regards wholly the abstract Ideas of the Mind, and those Relations and Connections they have one with another; our Judgments are grounded on *Intuition*, and the Manner of Reasoning is by *Demonstration*. In *Natural* Knowledge, respecting Objects that exist without us, their Powers, Properties, and mutual Operations; we judge on the Foundation of *Experience*, and reason by *Induction* and *Analogy*. Lastly, in *Historical* Knowledge, which is chiefly conversant about past Facts and Transactions; *Testimony* is the Ground of Judgment, and the Way of Reasoning is by *Criticism* and *probable Conjecture*. And now I think we are able effectually to overthrow that absurd Kind of *Scepticism* maintained by some of the Ancients, which brings all Propositions upon a level, and represents them as equally uncertain. What gave the first Rise to this Doctrine was, the Caprice of certain Philosophers, who observing that the Reports of Sense and Testimony were in some Instances deceitful, took thence occasion to suppose that they might be so likewise in others, and thereupon established it as a Principle, that we ought to doubt of every thing. But even with respect to this Doubting we are to observe, that it can in fact extend no farther than to Matters of *Experience* and *Testimony*, being totally and necessarily excluded from *Scientific* Knowledge. When Ideas make their Appearance in the Understanding, it is impossible for us to doubt of their being there. And when the Relations of any of our Ideas are clearly and distinctly discerned by the Mind, either immediately, which is *Intuition*, or by means of intervening Ideas, which is *Demonstration*; it would be in vain for us to endeavour to persuade ourselves that that is not, which we plainly and unavoidably perceive to be. In this Case therefore we cannot withhold our Assent; Truth forces its Way over all Opposition, and breaks in with so much Light upon the Mind, as to beget absolute and infallible Certainty.

And to be removed with Certainty

XV. INDEED in Natural and Historical Knowledge *Scepticism* may have place; because, as we have said, there is a Possibility of our being deceived.



Chap. III.

Of METHOD.

181

cived. But then it is to be observed, that a bare Possibility is a very weak Ground, whereon to bottom any Philosophical Tenet. It is possible that *Great Britain* may be swallowed up by the Sea before to-morrow; but I believe no Man is on this Account inclined to think that it will be so. It is possible the whole human Race may be extinguished the next Instant; yet this possibility creates no Apprehension that the thing itself will really happen. In a word, we ought to judge of things by the Proofs brought to support them, not by bare abstract possibilities; and when we have all the Evidence they are capable of, that alone is sufficient to convince, tho' perhaps the Contrary cannot be shewn to imply a Contradiction. Will any wise and considerate Man doubt, whether there be such a place as *America*, because he cannot prove by any necessary argument, that it is absolutely impossible all the Relations concerning it should be false? Strict and rigorous Demonstrations belong not to History, or the Philosophy of Nature. The Way of Reasoning in these Branches of Knowledge is by arguments drawn from Experience and Testimony. And when the Truth of any Proposition is in this manner sufficiently ascertained, insomuch that it appears with all the Evidence it is capable of, and we have as great Reason to believe that it is, as we could possibly have supposing it were, is not this upon the Matter as satisfactory as a Demonstration? It must be owned indeed, there is no inward Perception in the Case, and therefore our Assent cannot be said to be necessary and unavoidable. Men may in these Matters be *Sceptics* if they please; and if they are resolved upon it, it is in vain to contend with Obstinacy and Perverseness. I cannot however but observe, that if they will really stick up to their own Principles, and treat all things in good earnest as uncertain, that admit not of strict scientific Proof; their Conduct must be the very Madness or Folly. No Man can demonstrate Mathematically, that Poison has not been conveyed into his Meat or Drink. And if he will be so very cautious as not to taste of either, till he has reached his Degree of Certainty, I know no other Remedy for him, but that in great Gravity and Wisdom he must die or Fear of Death. The Truth of it is, the most zealous attacks of *Scepticism*, after all their pretended Doubts and cruples, find it yet convenient to behave in the several Occurrences of Life, as if they gave entire Credit to the reports of Sense and Testimony. They will no more venture upon a Dose of Arsenic, or rush into the Midst of a glowing Furnace, than if they verily believed Death would be the Consequence. And though in this it must be own-

*Matters of
Experience
and Testimony.*

ed they act discreetly, yet have we hence at the same time a very convincing Argument of the Absurdity of those Notions they affect to entertain. In reality, can any thing be more ridiculous, than to give into a Scheme of Thinking, which we find ourselves necessitated to contradict in almost every Occurrence of Life? Opinions are not to be taken up out of Caprice and Fancy, but to serve as Principles of Action, and standing Rules of Behaviour. When they answer not this main Purpose, they are unavailing and fruitless, and an obstinate Adherence to them, in spite of the repeated Admonitions of Experience, justly deserves to be branded for Folly. We shall not therefore attempt to multiply Arguments in a Matter so obvious, it sufficiently answering our present Purpose to have shewn; that Doubting and Uncertainty have no place in scientific Knowledge, and that even in Matters of History, and the Facts of Nature, an undistinguishing Scepticism would be in the highest Degree absurd.

XVI. BUT here perhaps it will be asked :
Science applicable to the Concerns of human Life. Why all this mighty Noise about Science, when even according to the present Account, it seems to be so very capricious and arbitrary a Thing?

For seeing it is wholly confined to the Consideration of our Ideas, and we are at liberty to frame and combine those Ideas at pleasure; this indeed opens a Way to Castles in the Air of our own building, to many chimerical and fanciful Systems, which Men of warm and lively Imaginations love to entertain themselves with; but promises little of that Knowledge which is worthy of a wise Man's Regard, and respects the great Ends and Purposes of Life. Where is the Advantage of barely contemplating our Ideas, and tracing their several Habitudes and Relations, when it is in truth the Reality of Things that we are chiefly concerned to know, and those Respects they bear to us and one another? To this I answer: that if indeed our Ideas no way regarded Things themselves, the Knowledge acquired by their means would be of very little Consequence to human Life. But since, as we have already observed, whatever is true in Idea, is unavoidably so also in the Reality of Things, where Things exist answerable to these Ideas; it is apparent, that by copying our Ideas with Care from the real Objects of Nature, and framing them in a Conformity to those Conjunctions and Circumstances in which we are most likely to be concerned, a Way is laid open to Discoveries of the greatest Importance to Mankind. For in this Case, our several Reasonings and Conclusions, holding no less of the Objects themselves, than of the Ideas by which they are represented, may be therefore applied with Certainty to these Objects, as often as they fall
under

under our Notice. Thus Mathematicians, having formed to themselves Ideas of Cones, Cylinders, Spheres, Prisms, &c. variously compare them together, examine their several Properties, and lay down Rules by which to calculate their relative Bulk and Dimensions. But now as Bodies answering a Figure to these Ideas, come frequently under our Observation, we have by this means an Opportunity of applying Mathematical Knowledge to the common Concerns of Life; and by determining precisely the Quantity of Extension in each Body, can the better judge, how far they will answer the Purposes we have in view. The same thing happens in Politics and Morality. If we form to ourselves Ideas of such Communities, Connections, Actions, and Conjunctions, as do or may subsist among Mankind; all our Reasonings and Conclusions will then respect real Life, and serve as steady Maxims of Behaviour in the several Circumstances to which it is liable. It is not therefore enough that we set about the Consideration of any Ideas at random; we must farther take care that those Ideas truly regard things themselves: for although Knowledge is always certain when derived from the Contemplation of our own Ideas, yet is it then only useful and worthy our Regard, when it respects Ideas taken from the real Objects of Nature, and strictly related to the Concerns of human Life.

XVII. HAVING thus shewn that there is such a thing as *Science*, fixed and ascertained the bounds of it, and explained its great Use and Importance in the Affairs of Mankind; it now remains that we lay down the Rules of Method peculiar to this Branch of Knowledge, and give some Account of the Manner, in which that Certainty and Conviction which are inseparable from it, may be most naturally and effectually produced. *Science*, as we have said, regards wholly the abstract Ideas of the Mind, and the Relations they have to one another. The great Secret therefore of attaining it lies, in so managing and conducting our Thoughts, as that these several Relations may be laid open to the View of the Understanding, and become the necessary and unavoidable Objects of our Perception. In order to this we must make it our first Care, distinctly to frame and settle the Ideas, about which our Enquiries are to be employed. For as the Relations subsisting between them can no other wise be discerned, than by comparing them one with another; and as this Comparison necessarily supposes, that the Ideas themselves are actually in the Mind, and at that very Time under our immediate Inspection; it plainly follows, that all

*The Method
of Science be-
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Ideas.*

Science must begin with fixing and ascertaining those Ideas. Now our Ideas, as has been already observed in the first Book, come all very naturally within the Division of *Simple* and *Complex*. *Simple* Ideas are excited by actual Impressions made upon the Understanding; and as they exist under one uniform Appearance, without Variety or Composition, are in no danger of being mistaken, or confounded one with another. It is otherwise in our *Complex* Conceptions. For these, consisting of many simple Ideas joined together, great Care must be taken, that we acquaint ourselves with the true Number combined, and the Order and Manner of their Connection. By this means alone are these our more intricate Notices kept distinct and invariable, insomuch that in all our several Views of them, they ever have the same Appearance, and exhibit the same Habitues and Respects. Here therefore, properly speaking, the Art of Knowledge begins. For although we find it easy enough to bound and settle our Ideas, where they consist of but few simple Perceptions; yet when they grow to be very complicated, it often requires great Address and Management, to throw them into such Views, as may prevent that Confusion which is apt to arise, from the joint Consideration of a Multiplicity of different Objects. Hence that Gradation in the Composition of our Ideas, which we have explained at large in the last Chapter of the first Book. For as they are by this means formed into different Orders, and these Orders arise continually one out of another; the Understanding, by taking them in a just Succession, gradually mounts to the highest Conceptions, and can at any time, with incredible Ease and Expedition, bring all their Parts distinctly into View. To know therefore the full Value of this Contrivance, we must attentively consider the strict Connection that obtains, between the several Classes of our Perceptions, when disposed in such a Series. Every succeeding Order is formed out of those Combinations that constitute the Rank next below it. And as in advancing from one Degree to another, we are always to proportion the Number of Notices united, to the Strength and Capacity of the Mind; it is apparent that by such a Procedure, the Ideas will be thoroughly ascertained in every Step, and however large and bulky, lie yet fairly within our Grasp. This obviously accounts for that wonderful Clearness of Apprehension, which we often experience within ourselves, even in regard to the most complicated Conceptions. For though the Multitude of Parts in many Cases be great, I may say beyond Belief; yet as they have been all previously formed into separate Classes, and the Classes themselves distinctly settled in the Understanding;



III. *Of METHOD.* 185

3; we find it easy by such a Series of Steps, to rise to a how complex soever, and with a single Glance of it embrace it in its full Extent.

II. BUT it is not enough that we barely
leas in our own Minds : We must also *And commu-
nicating them
by means of
Definitions.*
e a Way to render them stable and per-
; that when they disappear upon calling
Attention, we may know how to retrieve

gain with Certainty. This is best done by Words and
tions, which serve not only to subject them to our
view, but also to lay them open to the Perception of

And indeed, as one of the main Ends of reducing
edge into the Form of a Science is, the easy and ad-
ous Communication of Truth ; it ought always to be
Care, when we set about unfolding our Discoveries,
at the several Conceptions to which they relate, in a
accurate Series of Definitions. For till we have dis-
transferred our Ideas into the Understandings of those
n we address ourselves, and taught their Connection
ie appropriated Sounds, all our Reasonings will evi-
be without Effect. If Men comprehend not the true
of our Words, and are therefore led by them to bring
Ideas into Comparison, they can never sure see Con-
and Habitudes, that really subsist not. But if on the
the Terms we use, excite those very Perceptions in
which they denote in our own Minds ; then, as the
Relations pointed out will lie fairly open to View, they
eds be discerned with great Readiness and Ease, and
ie Character of Certainty upon all our Deductions.

THUS we see, that the *Method of Science*
with unfolding our Ideas, and communi-
them by means of Definitions. And here
great Importance to observe, that there
in all Languages, certain Original and Ele-
Names, whence our Descriptions take
it rise, and beyond which we cannot
e Meaning and Signification of Sounds.

For since
y Definitions are made up of Words, if we suppose
primitive and fundamental Terms, into which they
ve themselves, and where they at last necessarily ter-
it is evident there would be no End of explaining.
t is peculiar to our simple Ideas, that they can-
ginally be excited by Words, but must always
eir first Entrance into the Understanding, by the ac-
eration of Objects upon it. When therefore in a
f Definitions, we arrive at the Names of these Ideas,
a we can push our Descriptions no farther, but
arc

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simple Ideas
constitute the
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guage.*

are necessitated to suppose, that the Perceptions themselves have already found Admission into the Mind. If they have not, Definitions avail nothing; nor can they any other way be impressed upon us, than by betaking ourselves to the several Objects in which the Power of producing them resides. Hence it appears, that the primary Articles of Speech, into which the Whole of Language may be ultimately resolved, are no other than the Names of simple Ideas. These we see admit not Definitions. It is by Experience and Observation that we grow acquainted with their Meaning, and furnish ourselves with the Perceptions they serve to denote. For finding that those, in whose Society we live, make use of certain articulate Sounds, to mark the various Impressions of Objects, we too annex these Sounds to the same Impressions, and thus come to understand the Import of their Words. This Way of Knowledge takes place, in regard to all our simple Ideas; but in many of those that are complex, as they are the mere Creatures of the Understanding, and exist no where out of the Mind, there are of course no real Objects without us, whence they may be originally obtained. If therefore they could not be communicated by Descriptions, we should be left wholly without the Means of transferring them into the Minds of others. But happily it so falls out, that all complex Conceptions whatsoever, may be distinctly exhibited in Definitions. For as they are no more than different Combinations of simple Ideas, if these simple Ideas have already got Admission into the Understanding, and the Names serving to express them are known; it will be easy, by describing the Order, Number, and peculiar Connection of the Notices combined, to raise in the Mind of another the complex Notion resulting from them.

XX. SINCE then it is by simple Ideas and their Names, that we unfold all the other Conceptions of the Mind; it manifestly follows, that in handling any Subject *scientifically*, we must always suppose those to whom we address ourselves, previously furnished by Experience, with these first Principles and Elements of Knowledge. Nor is this by any means an unreasonable *Postulatum*: Because the simple Ideas that relate

to the Sciences, being few in Number, and coming very often in our Way, it is hardly possible we should be unacquainted with them, or not have frequently heard their Names in converse with others. What principally demands our Care is, to apply those Names aright, and according to the strict Use and Propriety of the Language in which we write. 'Tis seldom allowable to change the Signification of Words, especially those by which we denote simple Ideas. If however such a Liberty should at any time be found necessary, we may still make ourselves understood, by mentioning the Idea under its common Name, and signifying its Connection with the newly-appropriated Sound. Indeed it sometimes happens, that new and unusual Ideas of this Kind, are to be taken under Consideration, which we must therefore express by Terms of our own Invention. In this case, as the Ideas themselves cannot be laid open by Definitions, we refer to the several Objects whence they may be obtained; which tho' it

excuses

excites not the Perceptions immediately, yet sufficiently answers our Purpose, by putting Men in a Way of being furnished with them at pleasure.

XXI. THIS Foundation being laid, the Communication of our complex Conceptions by Definitions, becomes both easy and certain. For since the Ideas themselves are formed into different Orders, and these Orders arise continually one out of another; nothing more is required on our Part, than to observe a like Method and Gradation in our Descriptions. As therefore the first Order of our compound Notions, is formed immediately from simple Ideas; so the Terms appropriated to this Order, must be defined by the Names of these Ideas. And as the second and all the succeeding Orders, arise continually out of those Combinations, that constitute the Classes next below them; so the Definitions corresponding to these different Orders, gradually take in the Terms, by which the several inferior Divisions are regularly and successively expressed. In such a Series of Descriptions, it is evident at first sight, that nothing can be obscure and unintelligible. For as it begins with the Names of simple Ideas, whose Meaning is supposed to be known; and as in every Order of Definitions, such Terms only occur, as have been previously explained in the preceding Distributions; by advancing regularly from one to another, we gradually furnish ourselves with whatever is necessary, towards a distinct Conception of all that is laid before us. Nor is it a small Advantage attending this Disposition, that the several Ideas described are hereby excited in the Understanding, in the very Order and Manner in which they are framed by a Mind, advancing uniformly from simple to the most complicated Notions. Hence we see distinctly the various Dependence of Things, and being put into that very Train of Thinking, which leads directly to Science and Certainty, are drawn insensibly to interest ourselves in the Pursuit; insomuch that while in fact we do no more than follow a Guide and Conductor, we can yet hardly forbear fancying ourselves engaged in the actual Exercise of deducing one Part of Knowledge from another.

The Order and Connection of our Definitions.

XXII. WHEN we have thus fixed and ascertained our Ideas, and distinctly exhibited them in Definitions, we then enter upon the important Task, of tracing their several Habitues and Relations. In order to this we set about comparing them among themselves, and viewing them in all the Variety of Lights, by which we can hope to arrive at a Discovery of their mutual Agreement or Disagreement. And here it happens, that some Relations forwardly offer themselves to the Notice of the Understanding, and become the necessary Objects of Perception, upon the very first Application of our Ideas one to another. Those are therefore immediately owned, and constitute our *primary* and *intuitive* Judgments, being attended with the highest Degree of Evidence, and producing absolute Certainty in the Mind. But in many Cases, the Connection or Repugnance between our Ideas, even when true and real, comes not yet within our immediate View, but requires Search and Examination to discover it. On this Occasion we have recourse to

Of the Order and Connection of our Relations.

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intermediate Notices, and if by means of them we can muster up a Train of evident and known Truths, which disposed in a regular Series of Argumentation, lead at last to a Conclusion expressing the Relation we are in quest of, the Proof thence arising is called *Demonstration*. Now as the Conviction attending *Demonstration*, is no less necessary and unavoidable, than that which proceeds from *Intuition*; it evidently follows, that whether the Relations between our Ideas are immediately discerned by the Mind, or whether they are traced by means of intervening Perceptions, in either Case we arrive at *Science* and Certainty. This however is particularly to be observed, that the more remote and distant Respects, being deduced from such as are obvious and self-evident, the Propositions expressing these last demand our first Notice, and ought to be previously established, before we enter upon higher Investigations. When therefore in the *Method of Science*, we have finished the Business of Definitions; it must be our next Care, distinctly to unfold in Propositions, those immediate and intuitive Relations, which are necessarily seen and owned by the Mind, upon the very first comparing of our Ideas one with another. These Propositions have obtained the Name of *first Principles*, because occurring *first* in the Order of Knowledge, and being manifest of themselves, they suppose not any *prior* Truths in the Mind, whence they may be evidenced and explained. It is not needful to enlarge here, upon the Necessity of Circumspection and Care, in testing these primitive and fundamental Perceptions. For since the whole Superstructure of our Knowledge rests ultimately upon them, it is evident at first, that a Mistake in this Case, must at once overturn and annihilate all our future Reasonings. But having already explained the Nature of these Propositions in the second Book, unfolded the Notion of Self-evidence, and taught the Manner of distinguishing between the Truths of this Class, and those that are demonstrable; we shall for the present wave any farther Consideration of this Subject, referring the Reader to what is there advanced, if he desires fuller Information.

XXIII. THE first and more immediate Relations of our Ideas being thus pointed out, our next Business is, to investigate such as are remote and distant. And here it is that we have occasion for intermediate Notices, and a skilful Application of intuitive Truths. But though self-evident Propositions be the ultimate Foundation of our Reasoning, we are not on that account to imagine, that the Art of improving Knowledge lies, in assembling at random a large and comprehensive Stock of these. Even *General Principles* considered by themselves, avail but little towards the Investigation of Truth. They are indeed useful as *Media* of Certainty, by preserving the Evidence of our Reasonings distinct, which never fail to convince, if being pursued to their Source, they are found to resolve themselves into, and ultimately terminate in these Principles. But when we set about the *Encrease* and Enlargement of Science, far other Helps are required. For here the whole Secret consists, in devising and singling out such intermediate Ideas, as being compared with those others whose Relations

we

we enquire after, may furnish out a Train of obvious and known Truths, serving distinctly to investigate the said Relations. *Euclid* in the first Book of the *Elements* has demonstrated, that the three inward Angles of a Triangle taken together, are equal to two Right Angles. The Reasoning by which he establishes that Proposition, resolves itself into this general Principle: *Things equal to one and the same Thing, are equal to one another.* Will any one however pretend to say, that a bare Consideration of the Principle itself, led him to that Discovery? The merest Novice in Mathematics would, upon this Supposition, be equally qualified for the Business of Invention, with one that had made the greatest Progress; inasmuch as these general Principles of the Science, are commonly alike known to both. But the Truth of it is, *Euclid* having found out Angles, to which the three Angles of a Triangle, and two Right Angles, being compared, were found severally equal; thereby ascertained the Proposition in question, by shewing it to terminate in the above Axiom, tho' perhaps the Axiom itself was never once thought of during the whole Course of the Investigation.

XXIV. AND here it may not be improper to observe, that though it be usual in Reasoning, when we arrive at any particular self-evident Proposition, to refer to the general Axiom under which it is comprehended; yet is not this done out of absolute Necessity, or for the Sake of any additional Confirmation. All intuitive Truths, whether general or particular, standing upon the same Foundation of immediate Perception, are necessarily embraced for their own Sake, and require no mutual Illustration one from another. When therefore we have found, that the three Angles of a Triangle, and two Right Angles, are severally equal to the Angles formed by one right Line standing upon another, we thence immediately discern their Equality between themselves, independent of the general Axiom into which this Truth may be resolved. Nor do we in reality refer to that Axiom, by way of Evidence and Proof; but merely to show the Coincidence of the Example under Notice, with a previously-established general Principle. The same thing happens in all other Demonstrations whatsoever, which terminating thus in particular self-evident Truths, are therefore of themselves sufficient to Certainty, and acquire not any new Force, by being ultimately referred to general Maxims. This I mention here, to obviate a common Prejudice, whence many are led to imagine, that particular intuitive Propositions derive their Evidence from those that are general, as being necessarily included in them. But since they both stand upon the same Foundation of Certainty, and are admitted in consequence of immediate Perception, they have therefore an equal Claim to Self-evidence, and cannot be made plainer by any mutual Appeal.

XXV. As however it is usual in the Method of Science, to lay down certain general Principles, by way of Foundation for our future Reasonings; some will perhaps object, that this seems to be a needless Precaution, since Demonstrations must subsist without them, and commonly terminate in particular self-evident Truths, peculiarly connected with the Subject

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under

under Consideration. In order therefore to give a distinct Idea of the true Design of this previous Step, we shall begin with observing that by the particular Propositions in which Demonstrations terminate, must not be understood such ~~are~~ ^{are} so according to the strict Definition of the Word, or in Opposition to Universals; but only confined and limited Truths, when compared with others that are more general. Thus the Proposition, *Circles equal to one and the same Circle, are equal between themselves*, is in Strictness and Propriety Speech universal, because the Subject is taken in its full Extent, and the Predicate agrees to all the Individuals comprehended under it. We here notwithstanding consider it as only a particular Truth, because it is of a very limited Nature, when compared with the general Axiom mentioned above; *Things equal to one and the same Thing, are equal to one another*. For this not only extends to all the various Species of Figures, but takes in every Object without Exception, that comes under the Denomination of Quantity.

General Principles, the first to be established, the Basis of our Reasoning.

XXVI. This Point settled, it will easily appear, that the Method of premising general Principles in the Sciences, answers these two great and valuable Purposes. First, to contract the Bottom of our Reasoning, and bring it within such Bounds, as are sufficiently accommodated to the Capacity of the Mind. For Demonstrations being carried on by means of intermediate Ideas, which must always have some peculiar Connection with the Matter in hand, the particular self evident Propositions in which they terminate, are almost as various as the Subjects to which they relate. Thus in investigating the Equality of different Objects, whether Angles, Triangles, Circles, Squares, &c. the intuitive Truths on which the Proofs rest, always regard the particular Species, and may be therefore multiplied *in infinitum*, as well as the Species themselves. But now it is remarkable, that all these several Truths, numerous as they may appear, are yet reducible to this one general Principle already mentioned; *Things equal to one and the same Thing, are equal to one another*. The same Observation will be found to hold, in other parts of human Knowledge; insomuch that though the particular Truths on which we bottom our Reasonings, are really innumerable; yet may they be all without exception resolved into a very few general Maxims, and thereby brought readily within the Compass of the Understanding. When therefore we begin with premising these general Truths, and as we advance in Science, take care universally to resolve our Demonstrations into them; this must needs add a wonderful Clearness and Perspicuity to our Reasoning, and by establishing them upon a Foundation previously admitted, and of whose Strength and Firmness we are abundantly satisfied, give them that irresistible Force and Influence, which serves to produce absolute Certainty. Nor can we possibly imagine any thing more elegant and beautiful, than thus to behold Knowledge rising from a firm and fathomable Root, bearing its Head aloft, and spreading forth into innumerable Branches of Science; which tho' variously implicated and entangled, and stretching to a vast Extent, yet by their Union in one common Stock, derive thence to sure and staple a Support, that all the Assaults of Cavil and Scepticism, are not able to destroy or loosen their Connection.

XXVII. BUT *Secondly*, another Purpose served by general Principles is, that they enable us with less Fatigue and Labour, and less Hazard of Misconception, to satisfy ourselves as to the Justness of those Reasonings, by which Science is established. For since Demonstrations when pursued to their Source, terminate always in particular intuitive Truths, which are therefore the ultimate Foundation of Certainty; it greatly imports us to beware, that we receive not any Propositions under this Name, until we have distinctly settled them in our own Minds, and attained a full and clear Perception of that Self-evidence, on account of which they are admitted without Proof. But now these Propositions being many in Number, and differing according to the Nature of the Subject about which our Researches are employed; it must greatly perplex and retard our Reasonings, were we to check ourselves every time they occur, in order to examine them by the Rules of first Principles. Nor is it a Matter of slight Consideration, that in the Heat and Hurry of demonstrating, while the Mind is advancing eagerly from one Discovery to the other, we should be often tempted to pass them over hastily, and without that Attention their Importance requires; which must expose us to many Errors and Mistakes. These Inconveniences are effectually prevented, by the Method of premising general Truths: Because upon referring particular Propositions to them; as the Connection is obvious at first sight, and cannot possibly escape our Notice, the Evidence is discerned to be the very same, with that of the Principles to which they belong. And thus by a bare Reference, without the Trouble of particular Examinations, the Grounds of Reasoning are ascertained, and our Demonstrations found ultimately to rest on Maxims previously established.

Secondly, to ascertain the Justness of the Reasonings, and less Hazard of Misconception.

XXVIII. HAVING explained the Use of general Principles, shewn them to be the great *Media* of Certainty, and found, that in order to enlarge the Bounds of Science, we must have recourse to intermediate Ideas, as by means of them we are furnished with the several previous Truths, of which Reasoning consists: It now remains that we enquire, in what manner these Truths are to be disposed and linked together, towards the forming of just and legitimate *Demonstrations*. We have seen already in the preceding Book, that *Syllogisms* drawn up according to the Rules there established, lead to a certain and infallible Conclusion. If therefore evident and allowed Truths, are disposed in a *syllogistic* Order, so as to offer a regular Conclusion, that Conclusion is necessarily true and valid. And since in every genuine Syllogism, if the Premises are true, the Conclusion must needs be true; it manifestly follows, that the Conclusion already gained, being now a known and established Truth, may be admitted as one of the Premises of any succeeding Syllogism, and thereby contribute towards the obtaining a new Conclusion. In this manner may Syllogisms follow one another in Train, and lead to a successive Discovery of Truth; Care being always taken, that the Premises in every

Of the Manner of linking Propositions together in order to the forming of legitimate Demonstrations.

every Step, are either self-evident Propositions, or Conclusions previously established. And indeed the whole Art of *demonstrating* lies, in this due and orderly Combination of our Syllogisms. For as by this means all the several Premisses made use of are manifestly true, all the several Conclusions must be so too, and consequently the very last Conclusion of the Series, which is therefore said to be *demonstrated*. The same Order is to be observed in the Disposition of the Demonstrations themselves. That is, those Propositions are always first to be demonstrated, which furnish Principles of Reasoning in others; it being upon the Certainty of the Principles made use of, that the Certainty of the Truths deduced from them depends. And since even the different Branches and Divisions of Science, have a near Connection among themselves, insomuch that the Knowledge of one, is often pre-supposed in another; great Care must be taken to adjust the several Parts with an Eye to this Dependence, that those may always come first in Order, whence the *Postulata* of Demonstration in others are borrowed.

Why the Method here explained is called the Method of Science.

XXIX. In this Way of putting together our Thoughts, it is evident at first sight, that however far we carry our Researches, *Science* and *Certainty* will still attend us. But what is particularly elegant and happy in the Method now explained: we hereby see Knowledge rising out of its first Elements, and discern distinctly how those Elements are combined and interwoven, in order to the erecting a goodly Structure of Truth. *Experience* furnishes us with simple Ideas and their Names, which are the primary Materials of Thinking and Communication. *Definitions* teach how to unite and bind these Ideas together, so as to form them into complex Notions of various Orders and Degrees. The *general Principles* premised in Science, exhibit to the Understanding such intuitive and fundamental Truths, as express the immediate Relations between our Ideas, and constitute the ultimate Ground of Certainty. *Demonstrations* link known and established Truths together in such manner, that they necessarily lead to others which are unknown and remote. In fine, the duly adjusting the several Branches of Science, and the Demonstrations in every Branch, lays Knowledge so open to the Mind, that we see the Parts of it growing one out of another, and embrace them with full Conviction and Assurance. Thus we are gradually led from simple Ideas, thro' all the Windings and Labyrinths of Truth, until we at length reach the highest and most exalted Discoveries of human Reason. It is true the Method here laid down, hath hitherto been observed strictly, only among Mathematicians; and is therefore by many thought, to be peculiar to Number and Magnitude. But it appears evidently from what we have said above, that it may be equally applied in all such other Parts of Knowledge, as regard the abstract Ideas of the Mind, and the Relations subsisting between them. And since wherever it is applied, it necessarily begets *Science* and *Certainty*, we have hence chosen to denominate it the *Method of Science*, the better to intimate its true Nature and Extent.

ON

ON
NATURAL HISTORY.

I Come now to give you a small Taste of some of the most easy and pleasant Parts of Natural History. This Science consists in contemplating the Works of God, and gaining such a Knowledge of them, as the Use and Imperfection of our Faculties will permit : the Use of it is to teach us to admire and adore the Power, and Goodness of the great Creator. I at present enter into a Consideration of the Laws of *Life* and *Motion*, which make up the difficult Part of this Science ; but shall endeavour to give you such an easy and plain View of the World, as may excite your Curiosity, and usefully inform your Mind, without puzzling your Understanding.

Mr. You are very obliging, Sir ; I long to know something of this kind, and shall listen to your Informations with pleasure.

Whoever opens his Eyes and looks about him with Attention, must perceive a beautiful Variety of Objects at present themselves to View, and seem to demand Notice. In Summer, Meadows enamell'd with numbers of Plants and Flowers, affording rich Pasturage for Cattle ; waving with different Kinds of Grain for the Use of Mankind ; Woods, Forests, Plains and Mountains, differently situated ; and Ponds, Lakes, or winding Rivers, varying the Scene. In Winter, the Forests naked, Nature as if suspending her productive Power ; the Air severe and cold, the Earth frozen, the Waters rendered hard, and unfit for bearing Men, Cattle and Carriages ; the falling of heavy Snow, and all the Circumstances attending this rigorous Season ; every Particular deserves our Consideration and commands Enquiry. Look we out at Night, and Darkness covers and conceals the Beauties of our earthly World ; we shall find this temporary Loss made up to us by those

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those numberless and glorious Stars that glitter in the magnificent Canopy hanging over us ; and if the Moon arises, her mild and friendly Rays enlighten the silent Scene, and give a fainter Day. In short, whatever the Season of the Year, whether chearful Spring, warm Summer, rich Autumn, or cold Winter ; whatever the Hour of the Day or Night, Things worthy our most serious Notice are at hand, Things which to know may truly be called Learning, and in the Study of which an intelligent Being may always employ his leisure Hours with Pleasure. But some Kind of Method is necessary, to lead the Mind at first into a proper Train of Enquiry. I will therefore proceed Step by Step, first explaining some of the most common Appearances of Nature, such as Fire, Air, Water, Wind, Rain, Thunder, &c. then descending into the Bowels of the Earth, I will give you some Knowledge of Metals and Minerals ; such as Gold, Silver, Iron, Lead, with many other Phænomena, &c. then wandering o'er its Surface, we may take a View of the Vegetable World and all its Beauties, Trees, Plants, Fruits, Herbs and Flowers ; thence naturally proceeding to the lowest Degree of Animal Life, we will take a Voyage upon the World of Waters, and draw from Seas, and Lakes and Rivers, some of their most remarkable Inhabitants for our Inspection : After which again returning to the Land, we may survey the Insects, Birds and Beasts, which there inhabit ; and lastly, raise our Thoughts, and close the Whole with some particular Enquiries into the Nature and Powers of Man.

CH A P. I.

Of some of the most common APPEARANCES of NATURE.

of Fire. **I**T is difficult to say what is the real Nature and Essence of Fire, and the Enquiry would be too abstruse for your Comprehension ; but some of its Properties and Effects may be readily described, and easily understood. One Effect, and that which most particularly distinguishes it, is Heat. Another is Motion, which it communicates to all Bodies ; nay, some suppose, that all the Motion in Nature proceeds only from Fire, which resides more

Natural HISTORY. 195

or less in all Bodies whatsoever, and that if this Fire could be extracted and taken quite away, all Nature would grow into one solid Body, hard and immoveable. Another Effect of Fire is, that it dilates all solid Bodies, and rarifies all Fluids. It melts, calcines, or vitrifies, according to the Nature of the Body that is offered to its Power. It is thought by some to be the Cause of Light, but this is doubtful. It is certain there may be Fire without Light, as in a *Dutch stove*, which warms a Room without enlightening it; and there may be Light without Fire, as the Light of the Moon, which gives no Heat at all. In short, the Air we breathe, the Water we drink, the Earth from whence we draw our Food, are all enlivened and rendered fit for the Use of Man by this warm Principle residing in them.

AIR is that thin transparent Fluid in which we live, and move, and breathe; and without which we cannot subsist. *Of Air.* It surrounds this terraqueous Globe to a certain Height, and is called its Atmosphere, is carried along with it, and partakes of all its Motions both annual and diurnal. In this Atmosphere the Clouds and Vapours which are exhaled from the Earth, are suspended and float about. It is a compressible and dilatable Body; that is, it may be contracted to a smaller Space than it naturally fills, or extended to a larger, as may be proved by many Experiments. It is fitted by its Nature to penetrate and pervade other Bodies, by which means it animates and excites all Nature, and is one of the principal Causes of Vegetation. It is the Breath and Life of the whole Animal World, whether inhabiting the Air, the Earth, or the Waters. It would be tedious to reckon up all the Benefits of this useful and delicate Element; let it suffice, just to mention its wonderful Power in many useful Engines; its admirable Property of conveying smells to our Nose, Sounds to our Ears, and reflecting the light of the heavenly Bodies to our Eyes; also its great Use and Excellence in contributing by many other Ways to the life, the Health, the Pleasure of all Mankind.

WATER is a clear simple Fluid, inherent more or less in all Matter whatsoever. There is not a Body in all Nature but what will yield Water. *Of Water.* *Isaac Newton* affirms, that all Birds, Beasts, Fishes, Insects, Trees, and Vegetables, with their several Parts, grow out of Water, watery Tinctures and Salts, and by Putrefaction, return again to watery Substances. *Hartshorn*, after being

being kept forty Years, and turned so hard and dry, that being struck against a Flint it will yield Sparks of Fire; yet put into a Vessel and distilled, affords one eighth Part of its Quantity in Water. Dead Bones, after being dry'd 25 Years, will yield by Distillation half their Weight in Water. It is the most subtle and penetrating of all things except Fire; it will pass thro' Pores ten times smaller than Air will do. Leather or a Bladder will contain Air, but Water easily finds its Way thro' them. Nay, it has been known to force its Way when sufficiently pressed, thro' a spherical Vessel of Gold. *Thales the Milesian*, and some other Philosophers believe, that Water was the first Principle of all things; and some have thought that *Moses* himself was of the same Opinion, since before any thing was created, he tells us, *The Spirit of God moved upon the Face of the Waters*. The Uses of Water, besides the Beauty it gives to the World in Seas, Rivers, Lakes, and Ponds, are many and various. It is perhaps the most pleasant and healthful Drink in the World; as a Medicine, it is very efficacious in many Diseases; and as a Bath, it conduces both to Health and Pleasure. In fine, it is subservient to human Life in many and various Ways, in all Fermentations, and in dissolving all Bodies that we have occasion to dissolve. Also in the Motion of Mills, and many other Engines and Machines, its Powers are wonderful and surprizing.

Of Wind. WIND is a quick Motion of the Air flowing from one Point or Quarter of the Earth to another, of which, tho' various Conjectures have been made, the physical Cause is not yet known. The Winds are divided into, 1. *Perennial*, or such as blow all the Year the same Way, of which the most remarkable is that betwixt the two Tropics, blowing constantly at Sea from East to West, and called the general Trade-Wind. 2. *Periodical*, or those which constantly return at certain Times. Such are the Sea and Land Breezes, which in the Evening blow from Sea to Land, and in the Morning from Land to Sea. Such also are the particular Trade-Winds, which blow from the North to the Equator in our Summer, and from the South Pole to the Equator in our Winter. 3. *Variable*, or such as blow now one Way, and now another; are now high, now low, without any Regularity either as to Time or Place, which is the Case in most of the temperate Climates in the World. The Uses of the Wind are many and great. It is the common Servant of Mankind. The whole Bulwark of

of Navigation is performed by its Assistance. It is not only commission'd to warm and cool us by turns, but also to keep our Habitations clean and wholesome, which Office it performs by carrying away invisibly every thing that might infect and corrupt the Air, which if it was always at Rest, and agitated by frequent Gales and Storms, instead of refreshing and animating, would suffocate and poison all the World.

The CLOUDS are nothing but Vapours raised from the Waters, or from moist Parts of the Earth, partly by the solar, and partly by the subterraneous Heat; which Vapours being lighter than Air, mount upwards, till having reach'd such

Of the Clouds, Rain, Hail, and Snow.

Region of the Atmosphere, as is of the same specific Gravity with themselves, they are there suspended. After a while the watery Particles which were first too thin to be perceived, are so condensed by the Cold of the superior Regions, as to render them opaque enough to reflect the Light of the Sun, in which State they are called clouds; and when their specific Gravity is so increased as to make them descend, it is then called Rain. These Clouds are formed in the Atmosphere, at very different Heights from the Earth. When they are formed in the lower Regions of the Atmosphere, the Rain which falls from them is very small. When they are formed higher, the Bubbles falling within the Sphere of each others Attraction, incorporate as they fall, and become large Drops. If these Bubbles, in their descent thro' the Atmosphere, meet with a Region so cold as to freeze them, they condense into Flakes of Snow or hail. The Uses of the Clouds are manifold: 1st. They afford a delightful and refreshing Shade from the Heat of the sun: 2^{dly}, They pour down those fertile Dews and Showers on all the vegetable Tribe, to which they owe their Health, their Verdure, and their Beauty: And 3^{dly}, It is thought by many that the Fountains, Springs, and Rivers, which so beautifully adorn the Earth, and serve so many useful Purposes, derive their Origin from hence.

THUNDER is that loud and rumbling Noise which is heard in the lower Regions of the Air, occasioned by the sudden kindling of sulphurous exhalations. For, as Sir Isaac Newton observes, Vapours are raised into the Air, not only from Water, but also from Sulphur, Bitumen, volatile Salts, &c. there fermenting with nitrous Acids, they sometimes take

Of Thunder and Lightning.

Fire, and generate Thunder, Lightning, and other Meteors. If high in the Air, and far from us, they will do no Mischief; but if near us, may destroy Trees, Animals, Men: And the Nearness or Distance may be computed by the Interval of Time betwixt the Flash and the Noise.

Wallis observes, that commonly the Interval is about 7 seconds, which at 1142 Feet in a Second, the Rate at which Sound travels, gives the Distance about a Mile and a half; it is often nearer, and sometimes farther off. The Effects of Lightning are sometimes very surprizing; it has melted a Sword without hurting the Scabbard, and broken the Bone of a Man without injuring his Flesh, or even his Skin. It may be to purge the Air, and purify the noxious vapours which might otherwise grow pernicious.

An EARTHQUAKE is the greatest and most formidable Appearance of Nature. It is a violent Shake or Agitation of that Part of the Earth where it happens, accompanied with prodigious Noise like Thunder, and frequently with Emissions of Water, Fire, Smoke, or Wind, &c. The Causes that produce the Evaporation of Waters, and all the Meteors that roll over our Heads, do also produce these no less dreadful Effects under our Feet. For the Earth is abounding every where with Caverns, Veins and Canals, full of Water, others of Vapours and Exhalations, and many Parts of the Earth being replete with Nitre, Sulphur, Iron, Vitriol, and other Combustibles; these, either by some Fire they meet with, or from their Collision against hard Bodies, or their Intermixture with other Fluids, kindled, by which means bursting out into a greater Compass, the Place becomes too narrow for them; so that striking violently on all Sides, the adjoining Parts are shaken. A Noise is heard like Thunder, which continues till they either find or make a Vent to discharge themselves. This is an Appearance which you may probably never see being very uncommon in these Parts, I will give you some Particulars of a very dreadful one which happened betwixt fifty and sixty Years ago at *Jamaica*. In two Minutes it shook down and drowned 9 Tenths of the Town of *King's Royal*. The Earth opening swallowed up People, some of whom rose in other Streets; most of the Houses were thrown down throughout the Island. One *Hopkins* had his Plantation removed half a Mile from its Place. The Water from the Wells flew out with a violent Motion; the Houses

one Side of the Street were swallowed up, on the other they were thrown on Heaps ; and the Sand in the Street rose like Waves in the Sea, lifting up every Body that stood on it ; then immediately dropping down into Pits, and a Flood of Water breaking in, they were rolled over and over. The Ships and Sloops in the Harbour were overfet and lost ; the *Swan* Frigate in particular, by the Motion of the Sea and the sinking of the Harbour, was driven over the Tops of several Houses. In many Places the Earth would crack, and open and shut with a quick Motion, of which Openings two or three hundred might be seen at a time ; in some of which the People were swallowed up, others the closing Earth caught by the Middle and pressed to Death, in others their Heads only appeared. The larger Openings swallowed up Houses, and out of some issued Rivers of Water spouting up to a great Height in the Air. The whole was accompanied with Stenches and offensive Smells, the Noise of falling Mountains at a Distance, a rumbling under the Earth like Thunder, and the Sky in a Minute's time turn'd dull and redish like a glowing Oven.

The TIDES are that Flux and Reflux, or Ebb and Flow of the Sea, which is observed to happen nearly twice every Day. It flows from South to North for something more than six Hours, during which Time it gradually swells, so that entering the Mouths of Rivers, it drives back their Waters towards their Heads or Springs ; then seeming to rest for about 10 Minutes, it begins to ebb and retire back again from North to South, for six Hours more ; and the Waters sinking, the Rivers resume their natural Course. Then after a Pause of 10 Minutes more, the Sea begins to flow as before, and so alternately. The Period of a Flux and Reflux is 12 Hours 25 Minutes ; so that the Tides return later and later every Day by 50 Minutes. Now 24 Hours and 50 Minutes is a lunar Day, that is, the Moon passes the Earth's Meridian later and later every Day by 50 Minutes. So that the Sea flows as often as the Moon passes the Meridian, both under the Arch above the Horizon, and that below ; and ebbs as often as she passes the Horizon, both at the Eastern and Western Points ; that is, both at the rising and the setting of it. When the Moon enters the first and third Quarter, that is, at new and full Moon, the Tides are high and swift, and called *Spring-Tides* : When she enters the second and last Quarter, the Tides are weaker, and called *Neap-Tides*. All these

these Phænomena of the Tides are accounted for from the Principles of Gravitation. But it is yet too soon for you to enter on such abstruse and difficult Speculations. Let it suffice at present, that I give you only such a Taste of these things, as not to leave you quite ignorant of them, or just sufficient to excite your Curiosity to enquire farther concerning them, if at any time hereafter you should find an Inclination. I will now, according to my Promise, and in pursuance of the Method I proposed, conduct you down into the Depths and Caverns of the Earth, and show you some of the most remarkable and useful Phænomena which are there to be found.

CHAP. II.

Of METALS.

OF Metals there are six Kinds, *viz.* Gold, Silver, Copper, Iron, Lead, and Tin; to which some add Mercury as a seventh. The Philosophers both ancient and modern, hold various Opinions concerning the Origin and Formation of Metals. Some will have them, like Plants, derive their Origin from Seeds. Some think they are generated by a subterranean Fire. And some are of Opinion they are produced from Mercury, Sulphur and Salt; and that they take their Matter and Weight from the Mercury, and their Tincture and Form from the Sulphur. But these are Enquiries which I will not puzzle you with, I will only give you a short natural History of each of them.

Of Gold. GOLD is the heaviest, purest, and most ductile of all Metals. It is chiefly found in Mines, tho' sometimes Gold-dust is found in the Sand and Mud of Rivers, particularly in *Guinea*. The golden Ore that is found in the Mines is generally about 150 or 160 Fathoms deep, and is dug up in large Pieces, which usually contain some other mineral Matter, as Antimony, Vitriol, Sulphur, Copper, or Silver, particularly the last. The Manner of preparing and separating it is thus; they first break the Ore with Iron Mallets pretty small, then carry it to certain Mills, where it is ground to Powder, after which they pass it thro' several Sieves till it is exceeding fine. The Powder thus prepared, they lay it in Troughs, mix with it a sufficient

cient Quantity of Water and Mercury, and leave it in the Sun and Air for two or three Days, after which the coarse and muddy Earth is driven out by other hot Waters, till nothing remains but a Mass of Mercury and Gold, which are separated by Distillation. The Gold in this State is called Virgin Gold, which they melt in Crucibles, and then cast into Plates or Ingots. There are Gold Mines in most Countries in the World, though in *Europe* they are very sparingly scattered. The Mines of *Peru* and *Chili* in *America* are the richest, though very fine Gold is found in some Parts of the *East-Indies*. The Weight of Gold is to that of Water nearly as 19 to 1; and to that of Silver near 2 to 1. The Pound Weight of Gold, or 12 Ounces *Troy*, is divided into 24 Carats. Of all the Properties of Gold, its Ductility is the most surprizing. A single Ounce of Gold may be extended by the Gold-beater's Hammer to a Surface of near 150 square Feet, and by the Gold Wire-drawers, it will be extended to upwards of a Thousand, yet remain so entire, as that the least Flaw shall not be perceived, even by the Help of a Microscope.

SILVER is a white rich Metal, and, except Gold, the finest and most ductile of any. There *Of Silver.* are Silver Mines in all Parts of the World, but those of *Peru*, and some other Parts of *America*, particularly those of *Potosi*, are by far the richest, and continue to yield the Ore in as much Plenty as when first discovered, with only this Difference, that the Veins which were then almost in the Surface of that famous Mountain, are now sunk so deep, that the Workmen go down to them by a Descent of four or five hundred Steps. The Silver Ores when first dug are not all of the same Quality, Colour, or Value; some are white, or ash-colour, spotted with red or blue; but the richest, and that which is easiest wrought, is black; for the working of this nothing is requisite but to put it in the Fire, where the Lead evaporating, leaves the Silver pure. But the Method of separating Silver from the common Ore, is much the same as that of Gold, only that to every fifty hundred Weight of Ore, is added one hundred Weight of Rock-Salt. The standard of fine Silver is 12 Penny Weights, each consisting of 24 Grains.

COPPER is a hard, dry, heavy, ductile Metal, abounding much in Vitriol, and an ill-digested *Of Copper.* Sulphur, and found in Mines in most Parts of *Europe*,

Europe, but particularly in *Sweden*. It is dug up in large Fragments of Ore, which are first beaten small, then washed to separate the coarse and earthy Parts from it, then smelted and cast in a kind of Molds to form large Blocks call'd Salmons, or Copper Cakes. This is the *ordinary* Copper. *Rose Copper* is that which is melted once or twice more, and a Quantity of Tin and Antimony added to each Melting, to render it more beautiful. *Virgin Copper* is that which is sometimes, but seldom, found pure in Mines. Certain Proportions of Copper and Lapis Calaminaris make Brass. Certain Proportions of Copper and Tin make Bell Metal. Copper and Brass melted in equal Quantities make a Bronze for Busts and Statues; and and the Rust of Copper is Verdigrease.

Of Iron. IRON is a hard, dry, fusible, and ductile Metal, consisting of Earth, Salt, and Sulphur, but all impure, ill-mixed, and ill-digested, which render it very liable to rust. By often heating it in the Fire, hammering it, and letting it cool of itself, it is softened; by extinguishing it when hot in Water, it is hardened. There are a great Number of Iron Works in *England*, but the most considerable are those in the Forest of *Dean* in *Gloucestershire*, where the Ore is found in great Abundance. The Process of making Iron is as follows. Their first Work is to calcine the Ore, which is done in Kilns much like our common Lime-kilns, which they fill up to the Top with Coal and Ore intermixed, and setting fire to it at the Bottom, let it burn till the Coal is entirely consumed. This is done without melting the Ore, and serves to consume the more drossy Part of it, and to make it malleable. After this they carry it to the Furnaces, where, in a furious Fire that for Months together is not suffered to slacken Night nor Day, it is melted and cast into *Sows* or *Pigs* of Iron, as they are called; and lastly, it is taken from the Furnace to the Forge, where those Pigs are wrought into common Bars for use.

Of Lead. LEAD is a coarse, heavy, soft Metal, containing a little Mercury, some Sulphur, and much bituminous Earth. It is found in many Countries, but is particularly plentiful in *England*. When the Ore is first dug out of the Mine, it is beaten small, washed clean in a running Stream, and then sifted. After which it is melted in a Furnace, with a strong Charcoal Fire; as it melts, it runs through a Canal on one Side, leaving the Earth, Stones, and Dross amongst the Ashes of the Coals; and the Work-

men with Iron Ladles take it out, and upon Sand cast it into what Form they please, generally into what they call Pigs, about three hundred Pounds Weight a-piece. The Plummers cast it into Sheets or Pipes for various Uses.

TIN is a whitish Metal, not so hard as Silver, nor so soft as Lead. The Stannaries or Tin Mines *Of Tin.* in *Cornwall* and *Devonshire* furnish the greatest Part of the Tin that is consumed in all *Europe*. The Manner of preparing it as related in the *Philosophical Transactions* is thus. The Mineral Stone or Ore being dug and drawn out of the Mine, they break it in Pieces with large Iron Mallets; then bring it to a stamping Mill, where it is pounded with Stampers, much like those of Paper-Mills; and the Water passing through it washes away the earthy Parts, and leaves the metallic ones behind. This done, they lay it on Iron Plates, dry it in a Furnace, and grind it very fine in a crasing Mill; then wash it and dry it again. In this state it is called black Tin: To reduce it to white Tin, its proper Colour, they carry it to a Furnace or Blowing House, where by the Help of a fierce Charcoal Fire it is smelted. After it has passed all these Preparations, and is become cold, they forge it into Plates, which finishes the Process. Six Pounds of Brass, and fifteen Pounds of Lead, to an hundred Pounds of Tin, makes the Composition which is called Pewter.

MERCURY, or, as it is vulgarly call'd, *Quick-Silver*, is an imperfect Metal, neither ductile nor malleable, but a fluid Matter resembling melted Silver. It is found chiefly in *Hungary*, *Spain*, *Friuli*, and *Peru*; the greatest Part of what is us'd in *England*, is brought from the Mines of *Friuli*. Their Method of separating it is, first to grind the Mineral Glebe or Ore into Powder, then pouring a great Quantity of Water upon it, they stir it about till the Water becomes thick; when pouring it off, they put on fresh, and so repeat their Work till the Water comes off clear; and now all that remains at the Bottom of the Vessel is Mercury and other metalline Matter. With this they intermix the Dross or Refuse of Iron, and putting the whole into large Retorts, distil it; by which means all the heterogeneous, metallic, and stony Part is separated, and the Mercury left pure. The chief Properties of Mercury are, that Gold excepted, it is the heaviest of all Metals. It is also the most fluid of all Bodies; that is, its Parts cohere the least to each other and are the most easily separated.

ted. It is extremely volatile, being convertible into Fume by a very gentle Heat. It easily enters and closely adheres to Gold, less easily to Silver, with Difficulty to Copper, and to Iron not at all. The Weight of a Cubic Inch of each of these Metals, is as follows ;

	Ounces.	Drachms.	Grains.
Gold	12	2	52
Mercury	8	6	8
Lead	7	3	30
Silver	6	5	28
Copper	5	6	36
Iron	5	1	24
Tin	4	6	17

There are many other Things contained in the Bowels of the Earth, of great Use in human Life. Such are the vast Quarries of Stone and Marble so useful in Building : Such are the Mines of *Coal* so necessary to human Life, particularly in these cold Countries, where only they are found : Such are the various Beds of Clay, which serve the Potter's Use, the Fuller's, or the Brickmaker's. But there are two which I shall more particularly observe before we leave these lower Regions, and those are Diamonds and the Loadstone.

There are many Kinds of precious Stones, but of *Diamonds*. the Diamond, by the Ancients called Adamant, is the most valuable of them all. Its Goodness consists in its Water, or Colour, Lustre, and Weight : and its Defects are Flaws, Veins, Specks of red or black Sand, and a bluish or yellowish Cast. Diamonds are found only in the *East-Indie*, sometimes in Mines, and sometimes in the Sand of Rivers. It is the hardest of all Gems, inasmuch that it can only be cut and ground by itself, and its own Substance. The Manner of preparing them is first to rub them hard against each other, and the Dust which is thus rubb'd off the Stones, serves to grind and polish them ; and this is done by means of a Mill, which turns a Wheel of soft Iron sprinkled over with Diamond Dust mixed with Oil of Olives. The same Dust, well ground, and diluted with Water and Vinegar, is used in the sawing of Diamonds ; which is performed with an Iron or Brass Wire as fine as a Hair. There are many other precious Stones ; and I will give you the Names and Colours of some of the Principal. The Ruby, which is next in Value and Esteem to the Diamond, is of a crimson Colour, somewhat



Natural HISTORY.

25

what inclining to Purple. The Garnet is somewhat like it, and perhaps of the same Species. The Hyacinth is sometimes of a deep red, and sometimes of a yellow Colour. The Amethyst is of a bright Purple. The Emerald, a Grass Green. The Beryl, a Sea or bluish Green. The Sapphire a Sky Blue. The Topaz or Chrysolite is of a gold Colour. These are all transparent. Of Opake Stones, or such as are only half transparent, the Cornelian is best; it is of a pale red, sometimes bordering upon Orange. The Onyx is of a greyish Cast. The Turquoise is betwixt blue and green. Lapis Lazuli is studded with Spots of Gold on an azure Ground. But all these, with many others, might perhaps be ranked under the Classes of Agate and Jasper: Only the Agate is a little more transparent, harder, and will take a finer Polish; but both the Agate and Jasper vary their Colours extremely.

This wonderful Stone is usually found in Iron Mines, and is produc'd in most Countries of the World, *China, Bengal, Arabia, Hungary, Germany, and England.* It is a heavy Stone, something resembling the Ore of Iron, only closer and more ponderous. It is endowed with some surprizing Qualities and Powers. It attracts Iron, which will adhere to it very strongly; which Virtue it also communicates to the Iron so attracted. In every Magnet there are two Poles, one of which points Northwards, the other Southwards; and if the Magnet be divided into ever so many Pieces, the two Poles will be found in each Piece. It is this Property which has rendered it so useful in improving the Art of Navigation, for by the Help of a Needle properly touch'd on the Loadstone, the Sailor directs the Course of his Ship to whatever Quarter of the World he pleases, the Property of pointing towards the North being communicated from the Stone to the Needle. But to give you a perfect Notion of this, it would be necessary to describe and explain to you the Mariner's Compass, which as it would lead me somewhat out of the way, I shall at present decline. Thus you see the Bowels of the Earth may be considered as a Storehouse, containing a Number of Things for the Use of Man; many of which it would have been very inconvenient to have put any where else: Here they are out of his Way, yet ready at his Hand. But we will now ascend to the Surface of the Earth, and view the Wonders of the Vegetable World.

*Of the Magnet
or Loadstone.*

C H A P.

Natural HISTORY.

CHAP. III.

Of Trees, Plants, Herbs, and Flowers.

WHAT a delightful Verdure cloaths the Surface of this earthly Globe ! How charming to the Sense, how agreeable to the Imagination are its various Prospects ! Hills crown'd with Woods, and Vallies rich with Herbage ; Fields waving with golden Crops of various Kinds of Grain, and Meadows enamell'd with a thousand Herbs and Flowers. How beautiful are their Colours ! How rich, how fragrant, how refreshing the Odours which they breathe ! How wonderful and surprizing to Reason are the Formation and Structure of their Parts ! How useful and beneficial to the Life of Man their medicinal Virtues ! *Manifold are the Works of God, in Wisdom has he made them all !* The common Principle which animates this Part of his Works is Vegetation. I will first endeavour to give you some small Knowledge of that, and then proceed to consider a few of the Properties and Virtues of the particular Species. Every thing that grows upon the Face of the Earth, whether Tree, or Plant, or Herb, or Flower, is called a Vegetable ; has Parts and Organs form'd for Generation and Growth, though not Sensation ; and contains a kind of living Principle called Vegetation ; the Business of which Principle is to concoct the indigested Earth, and Salts, and Water which ascend through the Roots, and to assimilate them to the Nature of the Plant. Hence, though growing on the same Bed of Earth, and nourished with the same Sun and Air and Water, yet one shall carry an oily, another a milky Juice in its Veins ; one shall be of a yellow Colour, another of a red, and a third of a green, one shall yield an agreeable, another an offensive Smell ; one is sweet to the Taste, another bitter, another sour ; one is nourishing, another is poisonous ; one laxative, another astringent. It is generally thought among Naturalists, that Water is the principal Food of Vegetation, and perhaps it is ; yet a due Mixture of Earth and Air is very necessary to the Health and Vigour of all Vegetables whatsoever. Some indeed require a greater Proportion of Earth, and some of Water, than others do. But pure Water unimpregnated with any terrestrial Matter, if such a Thing could be had, would nourish no Plant at all, neither on the contrary would dry Sand. *Boerhaave* defines a Vegetable to be a Body generated of the Earth, to which



Oak

G. Morley. Sc.



Natural HISTORY. 207

which it adheres, or is connected by Parts called Roots, thro' which it receives the Matter of its Nourishment and Increase; and consists of Juices and Vessels sensibly distinct from each other. The Process of Nature in Vegetation is as follows. The Seed being committed to the Earth, and received into her Bosom, the warm Vapours thereof, joined with the Heat of the Sun, perform the Office of Incubation, disposing the Seed to receive the vivifying Power. Now the Earth every where abounds with Veins and Channels, wherein the Dew and Rain-Water, impregnated with fertile Salts, glide like the Chyle and Blood in the Veins and Arteries of Animals; and this Moisture meeting with a newly-deposited Seed, is strained through the Pores of the outer Rind, on the Inside whereof lie one or two thick seminal Leaves, which consist of a great Number of little Vessels or Bladders, with a Tube, correspondent to the Navel String in Animals; the Moisture of the Earth, I say, thus strained through the Rind of the Seed, makes a slight Fermentation with the proper Juices contained in it, which fermented Liquor is conveyed, by the aforesaid umbilical Tube, to the Trunk of the little Plant, from thence to the Germ or Bud which is contiguous to it, upon which succeeds a Vegetation and Increase of the Parts. This, according to the best Naturalists, is the Procedure of Nature in the Vegetation of Plants. But the Writers on this Subject, such as *Malpighi*, *Boerhaave*, *Hales*, *Miller*, and some others, will inform you farther, whenever you are disposed to consult them. I will now, according to my Promise, give you the Natural History of five or six of the most remarkable Vegetables, and then proceed to the Consideration of Animal Life.

The OAK is one of the largest and most useful of all Vegetables. It is the strongest and most durable of all Timber; and will continue firm and sound either in Air or Water longer than any other Wood. Hence the great Value of it to Ship-builders, Carpenters, and other Architects. It is produced from the Acorn, a small Fruit which it bears, very useful in feeding Hogs, &c. and is said by Naturalists to grow three hundred Years.

Of the Oak.

The VINE is a Plant or Shrub of the reptile Kind, supporting itself by creeping or climbing up any thing which stands near it. It is famous for its Fruit called Grapes, which it produces in Bunches, and from the Juice of which is made that dangerous Liquor,

Of the Vine.



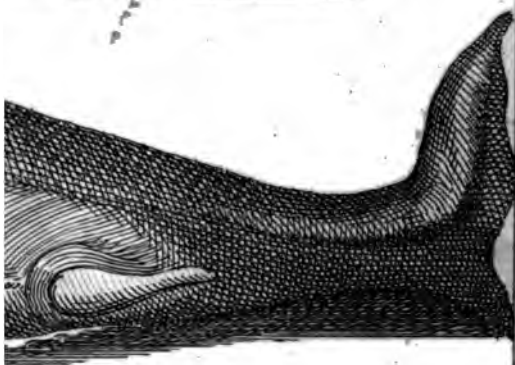
which consist of three wooden Rollers covered with Plates, and are wrought either by Water, or by Cattle, or Slaves. The Liquor, when the Canes are broken between the Rollers, runs through a list into the Sugar-House, and is conveyed into a Copper by a slow Fire, just to make it simmer, where it receives its first Separation. With the Liquor is here mixed a quantity of Ashes and quick Lime; the Effect of which assisted by the Action of Fire, is, that the unctuous is separated from the rest, and raised to the Top, in the form of a thick Scum, which is constantly taken off with a Skimmer. This done, it is farther purified in a second, third, and fifth Boiler, in which last it is brought to the Consistence of a Syrup. Then in a sixth Boiler, the Syrup receives its full Coction, and here all the Impurities left by the first Boilers are taken away by a new Lee, and a Water of Sulfur is cast into it. In this last Copper, there is scarcely one Third of what was in the first, the rest being Scum. By thus passing a Number of Coppers, the Juice is purified, thickened, and rendered fit to be made into any kind of Sugar.

Of Hemp. HEMP is a Plant of great use in the Manufactures, furnishing Thread, Cloth, &c. It is a tall slender Sort of Grass, which must be sown afresh every Year. Its Stem is hard, and its Leaves are of a roundish Form, and jagged at the edges, and its Bark is a tissue of Fibres, joined by a soft Matter which easily rots it. The Culture and Management of Hemp is a considerable Article in Agriculture, as there are many operations requisite in manufacturing it. It is sown in the spring, and is ripe in *August*, and the way of gathering it is to pull up the Roots; and tying it up in Bundles, they cut off the tops in order to preserve the Seed. Then laying the Bundles in Water for five or six Days to rot, they take it out, and beat the Hex or woody Part from the Bark, with sets of wooden Beetles: afterwards passing it through a Hack, which is a toothed Instrument resembling a Wood Comb, it becomes fit to spin into Thread, weave it into Cloth, or twist into Cordage, according to its different Fineness.

N. B. Flax is very much a-kin to Hemp both in its Culture, only Flax is finer and whiter, and a more noble Manufacture of Linen Cloth.



Vol. II, Page, 211.



La Moleque.



CHAP. IV.

Of FISH.

WE will now make a Voyage upon the World of Waters, and consider the Inhabitants which people this liquid element. How wonderfully the Hand of Almighty Wisdom formed and adapted them to the Place of their Abode! An glutinous Matter spreads itself all over their Bodies; not only enables them to glide more freely through the Water, but also prevents it from penetrating their Skin, and keeping them warm. They are furnished with Fins, to ballance and keep them upright; with a surprizing Strength and Motion in their Tails, which serve to row them forward with great Swiftnes; and with a Bladder of Air, by acting of which they sink to the Bottom, or by dilating it to the Top at pleasure. The Center of Gravity is placed in the fittest Part of the Body for swimming, and their Shape is most commodious for making way through the Water. They have Gills, by which they respire as Land Animals do with Lungs, and their Eyes are formed in a peculiar manner correspondent to the Element in which they live. Fishes are usually considered as Sea or Salt-Water Fish; River, Fresh-Water Fish; and Pond, or Lake Fish. They are distinguished into *cetaceous*, *cartilaginous*, and *spinous*. *Cetaceous* Kind have Lungs, and breathe like Animals, conceive and bring forth their Young like them, which afterwards suckle with their Milk. The *cartilaginous* are without Gills, and are produced from Eggs, like Birds. *Spinous* are provided with small sharp Bones to support and strengthen their Muscles, and are generally produced from Eggs. I will give you the Natural History of two or three most remarkable Fishes, and then proceed to the Conclusion of Insects.

all the Inhabitants of the Water, the largest, particularly those found in the North Seas, which are some of them 200 fathoms in Length, and of a Bulk proportionable. The head is about one third Part of its whole Length, on the top of which is what they call the Hovil or Bump, which are two Spout-Holes, from whence, either in Sport when wounded, he throws the Water with such Force, that

that it roars like a hollow Wind, or the Sea in a Storm, and may be heard at the distance of a League. His Eyes are not much bigger than those of an Ox, and placed near the Corner of his Mouth. The Flesh is coarse, hard, and lean, the Fat lying only between the Flesh and Skin. That which we call the Whalebone, is found in the Mouth and Throat, in every Whale perhaps 500 Pieces, each 15 Feet long. They never have more than two young ones at a time, and how long they go with young is uncertain. The Drug called *Sperma Ceti*, is the Brain of the Whale refined and purified by several Meltings. The Whale Fishery is a Trade of vast Consequence, employing upwards of 200 Vessels every Year, the greatest Part of which are *Dutch*, who for near 150 Years have engrossed the greatest Part of this valuable Trade to themselves. All that the Fishermen concern themselves with, is the Blubber or Fat, the Whalebone, and the Brain. The lean Part of the Carcass is left upon the Ice for the Bears, who are very fond of it. The Manner of taking them is with a Harpoon, or Harping-Iron, which is a large Iron Spear, or Javelin, five or six Feet long, with a triangular Point, barbed like an Arrow. This the Harpioneer throws at the Head of the Whale with all his Force, a Line being fastened to it, and if he is so lucky as to penetrate the Flesh, immediately they let out the Line, and the Whale dives to the Bottom with great Swiftnefs. But coming up again for Breath, they wound him a-fresh, till growing faint with loss of Blood, they at length venture so near him, as to thrust a long Launce under his Gills into his Breast, which soon dispatches him.

*Of the
Herring.*

The HERRING is a social Fish, generally swimming in large Shoals together. It is so well known, that a Description of it is needless. It dies immediately upon being taken out of Water, from whence arises the Proverb, *As dead as a Herring*. The Herring Fishery is a very valuable Trade, engrossed also by the *Dutch*, who employ near a thousand Vessels therein. They are found chiefly upon our own Coasts in the North Sea; and the *Dutch* begin their Fishing the 24th of *June*. They are called Red or White Herrings, according to the different Manner in which they are cured. White or pickled Herrings are thus prepared. Immediately upon taking them out of the Sea, they are cut open, gutted, and washed in fresh Water; then put into a Tub of strong Brine made with fresh Water and Sea Salt, where they are left for the Space of twelve or fifteen Hours;

Hours; then they are taken out, well drained, and carefully put up in Barrels, press'd close and laid even; a Layer of Salt is put up at the Bottom and Top of the Barrel, which is then stopp'd so close that no Air can get in, nor Brine out, which would be very prejudicial to the Fish; and in this manner they are sent all over *Europe*. The way of preparing Red Herrings is exactly the same, only they let them lie twice as long in the Brine, and when taken out they hang them up by the Head; about ten or twelve thousand at a time in a kind of Chimney made on purpose, under which is made a smoaky Fire of Brush-wood, where they are smoaked and dry'd for about 24 Hours, and then barrelled up for use.

Of all River-fish, the SALMON is chief, tho', whether it can properly be called a River-fish, or not, is doubtful; for they enter the Fresh Water about *February* or *March*, where they continue till *Autumn*, when they cast their Spawn, and soon after return to the Sea. It is said, by those who are acquainted with these Fish, that the Salt Water best promotes their Growth; but that Fresh Water most contributes to make them fat. Its Agility in leaping over Weirs, or any other Obstacles which oppose its Passage to or from the Sea, is surprizing; they have been observed to throw themselves up Cataracts and Precipices many Yards high. And when it so happens, that their Passage is effectually intercepted, they soon grow lean and sickly, and in a Year or two's time languish away and die.

Of the Salmon.

The TORTOISE is an amphibious Animal, living both by Land and Water. It is covered with an oval Shell, curiously clouded and marbled with various Colours, of which are made Snuff-boxes, Combs, &c. It is a dull, stupid Animal, its Brains being no bigger than a small Bean, tho' its Head is almost as big as a Cat's. They feed upon Moss, Grass, or Sea-weed. They are produced from Eggs as big as those of a Hen, only round as a Ball; of which they lay several Hundreds in a Season, near the Shore of the Sea, covering them with Sand; and about twenty-five Days after laying, the Eggs are hatched by the Heat of the Sun; and the little Turtles being about as big as young Quails, run directly to the Sea. A Tortoise of a common Size, will yield about 200 Pound of Flesh, which the Sailors preserve with Salt; and near 300 Eggs, which will keep a considerable Time. Some part of the Flesh is

Of the Tortoise or Turtle.

white,

white, and eats like Veal without any fishy Taste ; and other Parts are like Mutton and Beef.

*Of the
Crocodile.*

The CROCODILE is also an amphibious Creature, capable of living either in the Water, or upon dry Land. The Place where they most abound is the River Nile in Egypt, but they are also found in some Parts of India and Africa. Their Form resembles that of the Lizard; and they are of a yellow Colour like Saffron. They are produced from an Egg no larger than that of a Goose, of which the Female lays one every Day for about fifty Days, making first a Hole about two Feet deep in the Sand, and above the Overflow of the Tide, in which they deposite them during the time of Incubation ; and in about twenty-five or thirty Days they are hatched, and immediately run into the Water. From so small a Beginning proceeds this monstrous Serpent, the Size of which is from ten to fifteen Cubits in length, and they are said to grow as long as they live, which is supposed to be about sixty Years. It is a general Observation, and is affirmed by *Herodotus*, that the Crocodile has no Tongue ; but Dr. *Pococke* assures us, that it has a fleshy Substance like a Tongue, fixed all along to the lower Jaw, which may serve him to turn his Meat. He has two long Teeth at the End of his lower Jaw, and there are two Holes in the upper, into which these Teeth are directed ; and when he opens or shuts his Mouth, he moves, contrary to all other Animals, only the upper Jaw. *Herodotus* and *Pliny* say, that they lie hid in Caves during the Winter Season, and eat no Food ; but Dr. *Pococke* affirms, that he saw them in great Abundance all the Month of January. The common Method of killing them is by shooting them into the Belly ; for the Scales of their Back and Sides are so hard, that they are almost impenetrable even to a Bullet. They are a wily, cunning Creature, and it is said, that when they see a single Man, whom they are desirous of drawing into their Clutches, they will weep and sigh, and make most lamentable Moan, as if in the utmost Distress, till they have drawn him near enough for their Purpose, when suddenly springing upon him, they beat him down with their Tails, and immediately destroy him.

This is beautifully described by our old Poet *Spenser*, in that † Passage where he compares the dangerous Diffimulation

† *Fairy Queen*, Book I. Cant. 5. Stanza 13.

tion and treacherous Tears of *Dueſſa* (or Falſhood) to the Crocodile.

*As when a weary Traveller, that ſtrays
By muddy Shore of broad ſeven-mouthed Nile,
Unweeting of the perilous wand'ring Ways,
Doth meet a cruel crafty Crocodile,
Which in falſe Grief hiding his harmful Guile,
Doth weep full ſore, and ſheddeth tender Tears;
The fooliſh Man, that pities all the while
His mournful Plight, is ſwallow'd up unawares,
Forgetful of his own, that minds another's Cares.*

It is hence, that hypocritical or affected Grief and Weeping, is by the common Proverb ſtyl'd, *Crocodile's Tears*.

There is alſo a ſpecious Sophiſm in Rhetoric, call'd a Crocodile, which Mr. *Chambers* in his Dictionary, ſays, had its Name from the following Occaſion, invented by the Poets. — A poor Woman begging a Crocodile that had caught her Son walking by the River Side, to ſpare and reſtore him; was answer'd, That he would ſpare and reſtore him, provided ſhe would give a true Answer to the Queſtion he ſhould propoſe: The Queſtion was, *Will I reſtore thy Son or not?* To this the poor Woman, ſuſpecting a Deceit, ſorrowfully answered, *Thou wilt not*: And demanded to have him reſtored, becauſe ſhe had answered truly. Thou ſyeſt, ſaid the Crocodile, for if I reſtore him, thou haſt not answered truly: I cannot therefore reſtore him without making thy Answer falſe.

CHAP. V.

Of INSECTS.

LET us now make an Inſpection into the minuter Part of the Creation, and conſider ſome of the various Tribes of Inſects which people the Earth and Air. But you will perhaps imagine, that there can be nothing worthy of Notice in ſuch ſmall and inſignificant Creatures. In order to take off this Objection, it may not be amiſs, before I proceed to give you an Account of any of the particular Species, juſt to ſhew you that the Hand of Providence is extended in a particular manner to the Cure of theſe feeble Tribes; and that his

Wisdom and Goodness are as conspicuous in the Formation and Structure of their Bodies, and in the Beauty and Usefulness of their different Parts, as in the largest and most considerable Animals.

If we consider the vast Profusion of Azure, Green, Vermilion, Gold, Silver, Diamonds, Fringe, and Plumage, that adorn their Robes, their Wings, their Heads, and Bodies; who can forbear to acknowledge the Bounty of their Creator? We must equally admire his Goodness, that has furnished them with Arms against the Assaults of their Enemies, as well as for their own Defence. Most of them are provided either with Teeth, a Saw, a Sting, or Claws; and a scaly Coat of Mail generally defends their whole Body. The Safety of most of them consists in the Quickness of their Flight; some by the Help of their Wings, others by the Assistance of a Thread that supports them, by which, from the Leaves whereon they live, they suddenly drop themselves to a sufficient Distance from their Enemy; and others by the Spring of their hind Feet, whose Elasticity darts them at once out of the reach of Injury. Who also can sufficiently admire the infinite Wisdom that appears in the Contrivance of the different Organs and Implements given them for their Support and Convenience in their different Occupations and Ways of Life? Those who spin, have a Distaff and Fingers to form their Thread: Those who weave Nets and Lawn, are provided with Clues of Thread and Shuttles fit for the Purpose. Some build in Wood, and are therefore supply'd with Bills proper for piercing it: Others make Wax, and have Shops furnished with Rakers, Ladles and Trowels. Some have their Heads armed with a Trunk, a Saw, a Pair of Pincers; and carry in the other Extremity of their Bodies an Augre, which they lengthen and turn at discretion, and by that means dig commodious Habitations for their Families in the Heart of Fruits, in the Leaves, or under the Bark of Trees, and frequently even in the hardest Wood. Others that have tender Eyes, have the Benefit of a couple of Horns to defend them, which as the Animal moves along, especially in the dark, make trial of the Way, and discover by a quick and delicate Sensation, what would defile, drown, or endanger them. In short, the Minuteness of these Creatures is so far from rendering them insignificant, that on the contrary, their Mechanism is for that Reason the more astonishing. In Allusion to which, the great Mr. Boyle us'd to say, that his Wonder dwelt not so much on Nature's Clocks as on her Watches: and as Mr. Baker * observes, " If

" W^o

† In his ingenious Book on Microscopes,

“ we compare the Structure of a Mite with that of an Elephant, we shall probably concur in the same Opinion. “ The Largeness and Strength of the one, may strike us with “ Wonder and Terror ; but we shall find ourselves quite “ lost in Amazement, if we attentively examine the several “ minute Parts of the other. For the Mite has more Limbs “ than the Elephant, each of which is furnished with Veins “ and Arteries, Nerves, Muscles, Tendons, and Bones : It “ has Eyes, a Mouth, and a Proboscis too (as well as the “ Elephant) to take in its Food ; it has a Stomach to digest “ it, and Intestines to carry off what is not retained for Nourishment. It has an Heart to propel the Circulation of the “ Blood, a Brain to supply Nerves every where, and Parts of “ Generation as perfect as the largest Animal. Let us now “ stop, says he, look back and consider, as far as our Abilities “ can reach, the excessive Minuteness of all these Parts ; and “ if we find them surprizing, and beyond our Ideas, what shall “ we say of those many Species of Animalcules to whom a “ Mite, in Size, is as it were an Elephant ?” These general Reflections premised, I will now give you the natural History of some particular Insects, which I doubt not but you will think extremely surprizing.

The BEE is so well known, that I need not describe it to you. I will therefore reduce all I have to say on this noble and useful Insect to three Heads, viz. their Government, their Oeconomy, and their Manner of Working. That they are subject to Laws and Government, is asserted by all who have made Observations on them : And there is in every Hive a certain Bee of a larger Size than the rest, which is looked upon by the Community as their Monarch, and obeyed with great Loyalty. Most Naturalists are now of Opinion that this sovereign Bee is a Female, and the Mother of all the Hive ; that those we call Drones, which are larger and of a darker Colour than the common Bees, and of which there are not above 4 or 500 in each Hive, are Males, and that all the common working Bees are neither Male nor Female. Those who are furnished with Glass Hives, have been enabled to make many curious Observations. They tell us, the Queen has her Apartments in the upper Part of the Hive ; that when she appears in Public, which is seldom, she walks with a sedate and majestic Air, and is attended by several large Bees, (probably the Drones or Males) who follow her with Respect, or form a Circle round her, and fluttering their Wings, seem mightily

mightily rejoiced to see her. That in any Calamity they take great Care of her; and if by any Misfortune they are deprived of her, they neglect all Business, as having no Prospect of Posterity to provide for, and either fly away at random, or languish and die.

As to their Oeconomy, all the Business of the Hive is carried on with the greatest Diligence, and the most entire Union reigns throughout the whole Community. Their Habitations are in common; their Food and Provision in common; their Labours all in common; their Care of Posterity in common; they sympathize with one another in common Danger, and with the greatest Courage and Resolution fight for one another. They have no sinister selfish Regards, no clashing or inconsistent Interests; but are perfectly happy in their united Endeavours, which produce that Affluence and Plenty, that constitutes the Riches of the whole Society, and of every Individual. They are patient of Affronts when single, and at a Distance from their Hives; but when within the Reach of Assistance from their Fellows, they will not be disturbed in their Labours without resenting it. They are all temperate and frugal, though in the midst of Plenty; and amongst themselves strictly just and honest, but apt to rob and plunder their Neighbours without Mercy, which frequently produces Wars and Tumults betwixt one Hive and another. Their Neatness is such, that they will not suffer any thing offensive to remain within their Hives; and if any thing disagreeable is put in, that is too big for one Bee to remove, several of them will join their Forces, and drag it out of the Hive; and if it is too heavy for all their Efforts, they then cover it over with a kind of Glue, which prevents it from offending the Niceness of their Smell. With great Prudence and Sagacity they provide in Summer a sufficient Store to supply their Wants in Winter; and when the Spring returns, and the young Bees are become able to provide for themselves, and too numerous for the Hive to contain them, the old ones, in whom the Right of Sovereignty remains, send out a Colony or Swarm to shift for themselves, and find another Habitation.

As to their Manner of Working, it is more astonishing than any other Part of their History. When they begin to build the Combs, they divide themselves into four Bands; the first of which is assigned to the Fields, to collect Materials for the Structure, which chiefly consist of the fine Dust they gather from Flowers, and which mixed with a certain gluey Substance is made into Wax; the second work upon these
Materials,

Materials, and form them into a rough Sketch of the Dimensions and Partitions of the Cells, which are built hexagonal, with the nicest mathematical Exactness; the third examine and adjust the Angles, remove the superfluous Wax, and polish and complete the Work; and the fourth are Waiters who serve these Labourers with Provision, during the Time their Work is in hand. And such is their Diligence and Industry, that generally in a Fortnight's Time the whole Hive is filled with Combs. Many other curious Observations have been made on Bees, but these may be sufficient to excite your Curiosity to make farther Enquiries as you advance in Knowledge.

Having given you this Account of the Laws and Customs of Bees, under the Influence and *Of the Ant.* Government of a Monarch, it may not be amiss to give you some Information of the Commonwealth of Ants, who are governed by Laws equally regular and wholesome, though without one. *Go to the Ant, thou Sluggard, says Solomon, consider her Ways, and be wise, which having no Guide, Overseer, or Ruler, yet provideth her Meat in the Summer, and gathereth her Food in the Harvest.* The Inside of an Ant-hill is a kind of oblong City, divided into various Streets, that terminate at different Magazines; some of the Ants consolidate the Earth, and prevent its falling in, by incrusting it with a Surface of Glue; others amass several Splinters of Wood, which they draw over the Tops of their Streets, and use them as Rafter to sustain the Roof, and across these they lay another Rank of Splinters, and cover them with a Heap of Rushes, Grass, and Straw, which they raise with a double Slope, to turn the Current of the Water from their Magazines, some of which are appropriated to receive their Provisions, and in the others they deposite their Eggs. These Eggs produce *Maggots*, which after a time spin themselves Coverings, become *Aurelias*, and then *Ants*. The Affection of the Parents for their Young in the Aurelia State is so strong, that when Danger threatens, they instantly run away with them, and will sooner die than leave them. To prevent the Corn which they provide in the Summer for their Support in Winter, from shooting or growing, they bite out the Germen or Bud before they lay it up; and that the Moisture of the Earth may not occasion it to swell and rot, they provide a dry Earth or Sand to lay it in, and when the Sun shines not, frequently bring it out of their Holes to dry and harden it. As to their Summer Provisions, they take up with
any

any thing that is eatable ; you may see one loaded with the Kernel of some Fruit, another bending under the Weight of a dead Fly ; and sometimes several of them at work on a larger Substance, when what cannot be removed, they eat on the Spot, and carry Home all that is capable of being preserved. But the whole Society is never permitted to make Excursions at random ; some are detached as Spies to get Intelligence, and according to the Tidings they bring, all the Community (except such as are appointed to guard the City, and take care of their Young) are upon their March, either to attack a ripe Pear, a Cake of Sugar, or a Treasure of Grain. And their Expedition to it, as well as their Return from it, is under some Regulation ; the whole Band is ordered to assemble and move in the Tract ; however, as they are a free People, these Injunctions are never executed with much Severity ; if by Accident they spring a new Game in their Way, they are at liberty to leave the Tract, and seize upon it. Thus I have taught you some useful Truths relating to the Ants Republic, and the Realm of Bees ;

*How those in common all their Wealth bestow,
And Anarchy without Confusion know ;
And these for ever, though a Monarch reign,
Their separate Cells and Properties maintain.*

POPE.

*Of the
Silkworm.*

The SILKWORM is produced from a small Egg, not much bigger than a Mustard-seed, is of a pale Ash-colour, and feeds on Mulberry-leaves, or for the want of those, on the Leaves of Lettuce. During its Continuance in this Form, it suffers four Sickneses, each lasting about three Days, wherein it feeds not at all, but grows thicker, shorter and clearer, and in each Sicknes changes its Skin. Soon after this it begins to wind itself up into a silken Bag or Case, about the Size of a Pigeon's Egg, in which State it lies enclosed about fifteen or twenty Days without any Food, and seemingly without Life or Motion, and is then transformed into an Aurelia, or Chrysalis, and eating itself a Passage out of the End of its silken Sepulchre becomes a Moth, which is its last State, the State in which it lays Eggs and dies. These Eggs are kept for about ten Months, till the proper Season returns, which is the Beginning of May, and then they hatch of themselves into Silkworms. Those who keep these Insects never suffer them to eat their Way out of their silken Habitation, because

cause that spoils their Work ; but towards the End of their Continuance in that State. they wind the Silk from off them, and the enclosed Worm assumes its new State of a Moth, as well as if it had continued the whole Time in its silken Covering. The Quantity of Silk generally wound from one of these Balls or Cafes, is about 930 Yards ; but so extremely fine is the Thread, that the Weight of it is not above two Grains and a half.

This wonderful Creature is but very lately discovered, and the Accounts of it are so extremely surprizing, that many People for a Time were doubtful of their Truth, and with great Difficulty gave Credit to them. It is a small Insect found in Ditches or watery Places ; its Body is a kind of hollow Tube or Trunk, at the anterior End of which is placed several Arms, with which it seizes its Prey. It generally fastens itself at the posterior End to some Plant or Leaf, from which it depends and contracts or extends its Body and Arms at pleasure. They are voracious Animals, and will swallow a Worm twice or thrice their own Length. If the Worm comes endways, it is swallowed in that manner, otherwise it goes down double, and makes several Foldings in the Stomach, which distends wonderfully for its Reception. The Worm soon dies there, and after it has been squeezed or sucked, is voided by the Mouth. They produce their Young by a kind of Vegetation from the exterior Parts of their Bodies ; it is common to see five or six growing at a Time, and when one drops off, another comes in its Place. But the most surprizing Part of the History of this Insect is, that cut it into what Parts you please, each Part becomes a complete Polype. If you cut it in two, the Head Part produces a Tail, and the Tail Part produces a Head and Arms, sometimes in 24 Hours Space if the Weather is warm, but generally in two or three Days. If you cut it in three, the Head and Tail Parts produce as before, and the Middle produces both a Head and a Tail. If you cut it longways, through the Head, Stomach, and Body, each Part is half a Pipe, with half a Head, half a Mouth, and some of the Arms ; the Edges of these half Pipes gradually round themselves and unite, beginning at the Tail End, and the half Mouth and half Stomach of each becomes complete, and in a few Hours they will devour a Worm as long as themselves. If you take a Polype, and turn it Inside out as you would do a Stocking, the Outside will become the in, and the

*Of the
Polype.*

the Inside will become the out, and the Creature will eat and live as well as ever.

The Account which Mr. *Chambers*, in his *Cyclopædia*, gives of the Tarantula, is so full and satisfactory, that I need give myself no farther Trouble, than barely to transcribe what he has collected. The Tarantula, says he, is a kind of Spider; denominated from the City of *Tarentum* in *Apulia*, where it is chiefly found: It is about the Size of an Acorn, and is furnished with eight Feet, and as many Eyes; its Colour various, but it is still hairy; from its Mouth arise two Horns or Trunks, made a little crooked, with the Tips exceedingly sharp, through which it conveys its Poison.

These Horns, Mr. *Geoffroy* observes, are in continual Motion, especially when the Animal is seeking for Food, whence he conjectures they may be a kind of moveable Nostrils.

The Tarantula is found in several other Parts of *Italy*, and even in the Isle of *Corfica*; but those of *Apulia* alone are dangerous: even these, when removed thence, are said to become harmless. It is added, that even in *Apulia*, none but those found on the Plains are much to be feared, the Air being hotter there than on the Mountains. Mr. *Geoffroy* adds it as an Opinion of some, that the Tarantula is never venomous but in the Coupling Season; and *Baglivi*, that it is never so but in the Heat of Summer, particularly in the Dog-days, when becoming enraged, it flies on all that pass by.

The Bite occasions a Pain, which at first appears much like that felt on the stinging of a Bee, or an Ant; in a few Hours the Patient feels a Numbness, and the Part affected becomes mark'd with a small livid Circle, which soon after rises into a very painful Tumour: a little longer, and he falls into a profound Sadness, breathes with much Difficulty, his Pulse grows feeble, his Sense fails; at length he loses all Sense and Motion, and dies unless relieved. But these Symptoms come somewhat differently, according to the Nature of the Tarantula, and the Disposition of the Patient. An Aversion for Black and Blue; and, on the contrary, an Affection for White, Red, and Green, are other unaccountable Symptoms of this Disease.

All the Assistance Medicine has been able to discover by Reasoning, consists in some chyrurgical Applications on the Wound, Cordials, and Sudorifics; but these are of little Efficacy:

Efficacy: a thing that avails infinitely more is, what Reason could never have thought of, Music.

As soon as the Patient has lost his Sense and Motion, a Musician tries several Tunes on an Instrument, and when he has hit on that, the Tones and Modulations whereof agree to the Patient, he is immediately seen to make a faint Motion: his Fingers first begin to move in Cadence, then his Arms, then his Legs, by degrees his whole Body: at length he rises on his Feet, and begins to dance, his Strength and Activity still increasing. Some will continue the Dance six Hours without Intermission. After this he is put to Bed, and when he is judged sufficiently recruited of his first Dance, he is called out of Bed by the same Tune, for a second. This Exercise is continued for several Days, six or seven at most; in which Time the Patient finds himself exceedingly fatigued, and unable to dance any longer, which is the Characteristic of his being cured; for as long as the Poison acts on him he would dance, if one pleased, without any Discontinuation, till he died of the mere Loss of Strength.

The Patient perceiving himself weary, begins to recover, and awakes as out of a profound Sleep, without any Remembrance of what passed in his Paroxysm, not even of his Dance. Sometimes the Patient thus recovering from his first Access, is quite cured; if he be not, he finds a melancholy Gloom hanging on him; he shuns the Sight of Men, and seeks Water, and if he be not carefully looked to, throws himself into some River. If he do not die, the Fit returns at that time twelvemonth, and he is driven to dancing again. Some have had these Returns regularly for twenty or thirty Years. Every *Tarantulus* has its particular and specific Tune; but in the general, they are all very brisk, sprightly Tunes, that work Cure.

This Account was given to the Royal Academy of Sciences by Mr. *Geoffroy*, at his Return from *Italy* in 1702, and confirmed by Letters from *F. Gouye*. The like History is given us by *Baglivi*, in an express Dissertation on the Tarantula, published in 1696.

There are many other Wonders amongst these minute Creatures, which will afford you infinite Matter of Speculation and Amusement, whenever you shall be disposed to make farther Enquiries; but at present we will leave them, and take a View of that beautiful Part of the Creation which inhabits the Air.



C H A P. VI.

Of B I R D S.

IF we consider the Nature and Formation of Birds in general, many Reflections will naturally arise, and confirm in our Minds the Wisdom and Goodness of God, in so wonderfully adapting all their Powers to the Uses and Ends they were ordained to serve and pursue. All their Members, says the ingenious Mr. *Key*, are most exactly fitted for the Use of flying. The Muscles, which serve to move the Wings, are the largest and strongest, because much Force is required to the Agitation of them: the under Side of them is also made concave, and the upper convex, that they may be easily lifted up, and more strongly beat the Air, which by this means doth more effectually resist the Descent of their Body downwards. Then the Trunk of their Body doth somewhat resemble the Hull of a Ship; the Head is like the Prow, and for the most part is small, that it may the more easily cut the Air, and make way for their Bodies; the Tail serves to steer, govern, and direct their Flight, and turn their Bodies, like the Rudder of a Ship; which is evident in the Kite, who, by a slight turning of his Train, moves his Body which Way he pleases. Neither doth the Tail serve only to direct and govern the Flight, but also to support the Body, and keep it even; wherefore when spread, it lies parallel to the Horizon, not stands perpendicular to it, as Fishes do. And that they may the more easily be supported in the Air during their Flight, their Bodies are not only small and hollow, but of a broad Figure; nay their very Bones are more thin and light than those of other Animals. The Feathers also are peculiarly adapted to keep their little Bodies from being pierced with the Cold. And because this Bird is to live several Years, and the Feathers in Time would, and must necessarily be worn and shattered, Nature hath made Provision for the casting and renewing of them every Year. And to prevent their Feathers from being incommoded by Rains, all Birds have a Bag filled with Oil, and shaped like a Nipple, the Situation of which is at the Extremity of their Body. This Nipple has several small Apertures, and when the Bird perceives her Feathers to be dry, soild, or disorder'd by Gaps; or when she foresees approaching Rain, she presses this Nipple with her Bill, squeezes out the oily Humour, and drawing her
Bill



Vol. II. Page. 225.



C. Heston, Sc.





Natural History. 225

cessively over the greatest Part of her Feathers, oils
 fies them, gives them a Lustre, and fills up all the
 es with this viscous Matter; after which, the Water
 les over the Bird, all the Avenues to her Body being
 closed. Ducks, Geese, and all such Fowls as live
 Water, are provided with this unctuous Matter in
 undance.

various Forms and different Situations of their Nests,
 citude and Care with which they attend their Eggs,

Birth and Education of their Young, deserves also
 tention, and will command your highest Admiration.
 ll observe a surprizing Difference in the Materials,
 ture, and Situation of the Nests of the different
 yet all of the same Species building exactly alike.
 he Season of Incubation or Sitting arrives, you will
 active unsettled Creatures, forgetting their natural
 ons, fix themselves upon their Eggs, submit to sever-
 ks Restraint, renounce the Pleasures that so agreeable
 of the Year must afford, with a Care and Tender-
 ally surprizing. And when at last their young Ones
 then you will see all their Assiduity and Attention
 to provide them with Food, to defend them from
 and to take all other Care of their Education till
 provide for themselves, and then the kind parental
 ceases.

Cause of the Migration of some Species of Birds, or
 dden Disappearance at certain Seasons of the Year,
 be an Enquiry that will afford you some Pleasure.
 allow, the Stork, the Cuckoo, and some others,
 they go, or where they hide themselves, how they
 re Season when to come, and when to depart, will
 d you Matter of curious Enquiry, and useful En-
 ent.

would have you regard these Lessons rather as short
 d Directions, how you may turn over and look in-
 ook of Nature, than as a full and ample Account of
 various and useful Knowledge you will find there.
 ve neither Time at present, nor Abilities for more.
 mean while, I will give you the natural History of
 of the most extraordinary Birds, and then we will
 to Quadrupeds, or four-footed Beasts.

are many Sorts of EAGLES, but that
 e Golden Eagle is chief, and is common-
 n'd the King of Birds. He is found in
 irts of *Arabia*, and in the remotest Parts
 II. Of the Eagle.



of *Scythia*. He is a Bird of great Strength, exceeding bold, and very voracious and fierce in devouring his Prey. He is of a large Size, near four Feet long from the Point of the Bill to the End of the Tail; and betwixt the Points of each Wing, when extended, near six Feet; his Beak is very strong, crooked and sharp, so also are his Talons or Claws. Their common Prey is Hares, Rabbits, Kids, Lambs, &c. but when pressed by Hunger, they will seize on larger Animals. His Sight is so exceeding sharp and piercing, that he can see his Prey upon the Ground, tho' at ever so great a Height in the Air, and darts upon it with a surprizing Rapidity. And as his Eye is of such great Use in spying out his Prey, Nature has contrived to preserve it with uncommon Care, having instead of one, provided it with four Lids or Covers. They build their Nests generally on the Sides of high and inaccessible Rocks, or on the Tops of old decay'd large Trees, and seldom lay above two Eggs at a Time. They live to a prodigious Age, some say three hundred Years, but that is probably a Mistake.

Of the Ostrich. This is generally thought to be the largest, at least it is one of the tallest Birds in the World, being full as high as a Man on Horseback. It is found both in *Africa* and *Arabia*, particularly in the sandy Desarts of *Arabia*. The Head and Bill resemble those of a Duck, their Wings are not large enough in Proportion to their Body to raise them from the Ground, but serve as Sails or Oars to cut thro' or impel the Air, and add great Swiftnefs to their Feet, which are shod with a horny Substance, enabling them to tread firmly, and to run a long Time without hurting themselves. They are frequently hunted with Greyhounds, and when in Danger of being taken, suddenly stop, let down one of their Wings, and covering their whole Body with it, suffer the Dog to get his Mouth full of Feathers, then taking to their Heels again, ere the Dog can disengage himself from the Feathers, they are got a considerable Way before him. What is most remarkable of this Bird is, that she lays her Eggs in the Sand, and entirely forgetting them, suffers them to be hatched by the Heat of the Sun, and quite contrary to all other Creatures whatsoever, appears utterly destitute of parental Affection.

The SWAN is one of the principal of those amphibious web-footed Birds that live either by Land or Water. It is a large and stately Bird, of a Milk-white Colour, and on a fine Canal or River makes a beautiful Appearance. Its Neck is very long, and consists of between twenty and thirty Joints, which enable it to fish as with a Line. In swimming it is said to use one Foot as an Oar, and with the other to steer its Body. They generally make their Nests among the Rushes, near the Banks of Rivers; and during the Time of the Female's sitting, the Male will attack any body that comes near her Nest, with great Fierceness and Obstinacy. When on Land, they feed either on Grass or Grain, and in the Water on Fish, or the Spawn of Fish; and they are said to live upwards of a hundred Years. The Notion of this Bird's melodious singing before its Death is a vulgar Error, and might probably take its Rise from the Fable of the Ancients, that the Soul of *Orpheus* the old Greek Poet and Musician, passed by Transmigration into the Body of a Swan.

Of the Swan.

Of all singing Birds the NIGHTINGALE is allowed to be the chief; his Notes are sweeter, more melodious, and more various, than the Notes of any other Bird. And what is remarkable is his beginning to sing, or at least continuing to sing, after all the others have ceased, as if conscious to himself that his Music deserved a more particular Regard. It is very rare that one can get a Sight of these Evening Musicians; but the Beauty of their Feathers is not at all equal to the Melody of their Songs, their Colour being a dusky redish brown; and in Size and Shape they resemble the Goldfinch. The Time of their singing and breeding their young ones, is from the latter End of *April* to the Beginning of *June*, after which they are never either heard or seen, till the same Season returns again; insomuch that many look upon them as a Bird of Passage. The particular Formation, and delicate Structure of the Windpipe in singing Birds, is peculiarly adapted to form the nicest Modulations of Voice, is very well worthy of curious Observation.

Of the Nightingale.

This is one of the most noted of those we call Birds of Passage, as it is a domestic Bird, dwelling altogether in Towns and Villages, and building its Nests even in our Houses. Of these Nests the Architecture, the Materials, and their manner of using them.

*Of the Swan.
Ivau.*

them, are altogether surprizing. She wants neither Sticks, nor Hay, nor Ligaments of any Sort ; but wetting her Breast and her Wings on the Surface of the Water, and then shaking the Moisture over the Dust, tempers and works it up with her Bill into a kind of Mortar or Cement, with which she erects a Dwelling, equally secure and convenient, and with such wonderful Exactness and Regularity, as is not to be imitated by the Art of Man. Concerning the Migration of these Birds, or their Disappearance at the End of Summer, Naturalists are very much divided: some supposing that they take Wing by consent about the End of *September*, and fly to some warmer Climate; and others, that they hide themselves in Rocks, or Caves, or under the Surface of the Water, where they have sometimes been found in great Numbers hanging together by the Feet like Bees in a Swarm. And that this is the Truth of the Matter appears probable also from hence, that at the Beginning of the Spring Season, they are generally found near Rocks or watery Places, flying weakly about, as it were to try their Wings after their first Revival from their Winter Sleep.

Of the Bat. I will conclude my Account of Birds with this Creature, as it partakes both of the Nature of Birds and of four-footed Beasts. Its Head, Body, and the Hair or Furr with which it is covered, very much resemble those of a Mouse; it also brings forth its young ones perfectly formed like the four-footed Kind, and gives them Suck. It partakes of the feather'd Kind, in having only two Legs, large Wings, and the Power of flying. Its Wings consist of one entire Skin, webb'd together somewhat like the Feet of Water-Fowl, and at the Top of their Wings are two Hooks or Claws, which they make use of to hang by whilst they are feeding, sleeping, or resting themselves. These Creatures very rarely appear in the Day-time, but fly in the Dusk of the Evening only, and are said to sleep all the Winter in the Holes of old Houses or Walls. It is a very proper Emblem of a Man that acts a false or double Character, appearing now in one Light or Shape, and then in another; and as such a Man is despised and kicked out of all honest Company, so these doubtful and amphibious Vermin are allowed the Honour of a Place neither amongst the Birds nor Beasts.

CHAP. VII.

Of Four-footed BEASTS.

WE are now come to that Part of the Animal Creation, which both in the Make of their Bodies, and in the Powers of their Minds, seem to approach the nearest to Man. I have therefore reserved to this Place the Consideration of that Principle which is said to govern and direct all the Animal World, except Mankind, I mean Instinct. Some Reflections on that Principle, and the Difference between it and Reason, will afford you a Lesson both instructive and entertaining.

As the Author of all Beings hath endowed the human Mind with the Principle of Reason, to guide and direct Mankind in all the various Concerns of Life; so he hath implanted in all the inferior Creatures a Principle, which tho' less noble and extensive, is a more uniform and certain Guide than Reason itself. This Principle we call Instinct. It shows itself differently in every different Species of Animals, yet in every Animal is suitable to the Nature and Circumstances of that particular Species. Thus, as the ingenious Mr. Ray observes, all Creatures know how to defend themselves, and offend their Enemies, where their natural Weapons are situate, and how to make use of them. A Calf will so manage his Head as tho' he would push with his Horns, even before they shoot. A Boar knows the Use of his Tusks, a Dog of his Teeth, a Horse of his Hoofs, a Cock of his Spurs, and a Bee of her Sting. Now, why another Animal which hath no Horns should not make a Show of pushing, or no Spurs, of striking with his Legs, and the like, I know not, but that every Kind is providentially directed to the Use of its proper and natural Weapons. 2. Poultry, Partridge, and other Birds, at first Sight know Birds of Prey, and make Sign of it by a peculiar Note of their Voice to their Young, who presently thereupon hide themselves. 3. All young Animals as soon as they are brought forth, know their Food; for Example, such as are nourished with Milk, presently and their Way to the Paps, and suck at them; whereas none of those who are not designed for that Nourishment ever offer to suck, or seek for



any such Food. 4. Such Creatures as are Web-footed or Fin-toed, whether Birds or Beasts, are naturally directed to go into the Water, and swim there; as we see Ducklings, tho' hatched and laid by a Hen, if she brings them to the Brink of a River, or Pond of Water, they presently leave her, and in they go, tho' they never saw any such thing done before, and tho' the Hen clucks and calls, and does what she can to keep them out. 5. Birds of the same kind make their Nests of the same Materials, laid in the same Order, and exactly of the same Figure; so that by the Sight of the Nest one may easily know what Bird it belongs to; and this they do tho' living in distant Countries, and tho' they never saw nor could see any Nest made. This, together with the curious and artificial Contexture of such Nests, and their Fitness and Convenience for the Reception, Hatching and Cherishing the Eggs and Young of their respective Builders, is a great Argument that they are acted upon by a Wisdom superior to their own, and driven as it were to bring about Ends which themselves aim not at (so far as we can discern) but are directed to. *They act not by Art, says Aristotle, neither do they argue, neither do they deliberate about what they do.* And therefore, as Dr. Cudworth well observes, they are not Masters of that Wisdom according to which they act, but only passive to the Instincts and Impressions thereof upon them. Lastly, What can be more wonderful than the Migration of some kinds of Birds from a hotter to a colder Country; or from a colder to a hotter, according to their Nature, and to the different Seasons of the Year? What move them to shift their Quarters? What directs them which Way to steer their Course? What impels them to cross an Ocean of which they can see no End, and enables them to overcome the Sense of Hunger, and the Fear of Drowning? These and many other Wonders, are discoverable in the Brute Creation; yet that it is Instinct, not Reason, they act by, appears manifestly from hence; that in all their Works there is no Variation, but every Species doth naturally pursue at all times the same Methods and Ways, without any Tutorage or Learning: whereas Reason without Instruction, would often vary, and do that by many Methods, which Instinct doth by one alone. The Reason of Man is an active and fruitful Principle, which knows, and would be perpetually enlarging its Attainments, which deliberates, wills, and chuses with Freedom, which operates, and, if I may use the Expression, daily creates new Works. If a Spider had all the Skill
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of a Weaver, she would make something else beside her Web; were the Swallow as skilful as a Mason, she would build with other Materials than Dirt. In short, were Animals once capable of Thought, they would not be limited to one invariable Track; new Ideas would be infused into their Minds, and we should not see them embarrassed, stupid, and intractable when taken out of the Way of Life, which is peculiar to each Species.

These Reflections may suffice at present to give you some faint Notion of the Difference between Reason and Instinct. We will now proceed to the natural History of some few of the most remarkable Quadrupeds. And I cannot begin with a more noble or more useful Animal than the Horse.

* If Custom had not dignify'd the Lion with the Title of King of Beasts; Reason, one would think, could no where confer that Honour more deservedly than on the Horse. As to the Lion, he is endowed with no Kingly Qualities whatsoever, except those of devouring his Subjects, and inspiring them with Terror: but the Horse, on the contrary, is never injurious to other Creatures, either in their Persons or Properties; his Qualities are all amiable, and there is nothing in him that can excite the least Aversion. There is such a Nobleness in his Disposition, such a Beauty in his Formation, and such a Grandeur in his whole Department, as strongly attracts our Regard, and commands our Admiration. And if we consider in how many various Ways he is useful and beneficial to Mankind, we shall become more and more engaged in his Favour. Is he required to cultivate our Lands, to bear Home our Harvests, or to carry our Goods or Persons from Place to Place? he is always prepar'd, and always willing, tho' wearied in our Service. Is he design'd for nobler Sports, to follow the Hounds and Horn o'er Hedges, Hills and Dales, or to try his Swiftness in the level Course; with what Ardor he seems inspir'd! he snuffs the Air, he paws the Ground, he neighs, and seems to call aloud for the Trial; and in the generous Contention, such is his Eagerness and Emulation, that he will often rather die than be outdone. Or is he called forth to bear our Warriors to the Field of Battle? how valuable is his Strength, his Swiftness, and his Conquest! † *His Neck*

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* Vide *Spectacle de la Nature*, Vol. I. Dial. xii.

† Job Ch. xxxix. ver. 19.

Neck is clothed with Thunder; the Glory of his Nostrils is terrible. He paweth in the Valley, and rejoiceth in his Strength; he goeth on to meet the armed Men. He mocketh at Fear, and is not affrighted; neither turneth he back from the Sword. The Quiver rattleth against him, the glittering Spear and the Shield. He swalloweth the Ground with Fierceness and Rage, neither believeth he that it is the Sound of the Trumpet. He saith among the Trumpets, ha, ha! He smelleth the Battle afar off, the Thunder of the Captains and the Shouting.

If the Horse, on account of his noble and generous Qualities, claim the first Place among Animals, the Dog, for his Faithfulness and Sagacity, may very deservedly be honour'd with the second. There is scarce in any Species of Creatures whatsoever, so great a Variety as in that of Dogs; their Shape, their Size, their Colour, their Qualities are extremely different. The large *English* Mastiff is famous for Strength and Courage; so also is the Bull-dog: the Greyhound is exceeding swift and quick-sighted; the Hound slow, but so sagacious in his Smell, that the fleetest Game can seldom escape him: the Spaniel is excellent on the Water, the Pointer in the Field: the common Cur is endowed with many Qualities useful to the Farmer, the Shepherd, and to every House-keeper; and the Lap-dog, for such fine Ladies, or Lady-like Gentlemen as have nothing to do, is a very agreeable Companion. But the two Qualities of Faithfulness and Sagacity seem to run thro' the whole Kind, and many extraordinary Instances have been given both of the one and the other. *Plutarch* tells us, that in a public Spectacle which he himself saw exhibited before the Emperor *Vespasian* at *Rome*, a Dog was taught to perform a certain Part, in which he was to put on the Appearance of dying by Poison. That after the Piece of Bread was given him which was supposed to poison him, he began to reel and stagger, and at length fell down, seem'd to grow stiff, and lay to all Appearance without Life; insomuch that he was dragg'd about the Stage by several People as a dead Dog, without giving any Signs of Motion: but that when his Part required him to come to Life, he first opened his Eyes, then moved his Head, then stretched himself, and at length got up. Another Instance of uncommon Sagacity is given us of a blind Dog. A large Company of People were got together in the Market-place at *Rome*, to see a Dog perform several Tricks which he had been taught

by his Master, among the rest this was one. Several of the Company agreed to give the Master different Pieces of Gold, Silver, Copper, Rings, Bracelets, and many other Things, which he put all together, and hid them under the Surface of the Earth; then commanding the Dog to seek, he presently found them, and carry'd each Piece to its proper Owner without the least Mistake. There are Instances of uncommon Docility, and Proofs of some surprizing Powers in the Minds of these Animals, which if rightly attended to might be made of great Use to Mankind. Of their Love and Fidelity to their Masters, and their great Care and Courage in defending their Persons, their Houses, their Cloaths, or any thing belonging to them, the Instances are innumerable, and happen every Day.

Of all Land Animals the Elephant is by much the largest; and if common Reports are true, it is at least equal to any in Understanding and Sagacity. They are bred only in hot Countries; the *East-Indies*, and some Parts of *Africa* abound with them very much. They are frequently eleven or twelve Feet high, many much higher; their Make is very clumsy, and their Strength prodigious. Their Colour is generally Mouse Dun, or Black; and the Skin of their Sides and Back so hard that it is not easily pierced even by a Sword or Spear. Their Eyes are small, something resembling those of a Swine, but very red. They have four Teeth on each Side with which they grind their Meat, and two large Tusks which hang out of their Mouths, and grow to a prodigious Size, frequently more than a hundred Weight each. These they cast every tenth Year, and by that means afford a very valuable Commodity to the Natives, who exchange these Ivory Teeth with the *Europeans* for many other Wares. But the most remarkable Part of the Elephant is his Proboscis or Trunk. This is a large, hollow, gristly Membrane, hanging down from the upper Part of his Nose towards the Ground, and (if one may compare great Things with small) something like the Skin upon the Bill of a Turkey Cock. This wonderful Member is so admirably contrived, so curiously wrought, and with so great Agility and Readiness applied by this unwieldy Creature to all its several Occasions, that it is an Instance of such uncommon Workmanship, as none but an Almighty Maker could contrive. Another Remarkable of this Creature is, that the Nipples of the Female are placed near her Breast, by reason

son she is forced to suck herself, and by the Help of her Trunk conveys the Milk into the Mouth of her Young. The Time of their going with Young is one whole Year, and the Length of their Life is generally thought to be upwards of a hundred. They live upon Plants, or Roots, which they dig out of the Earth with their Tusks; or upon the Fruit, or Branches of Trees, which they pull down with their Trunks. They are, when tamed, a very docile Creature; and the various Uses the ancient *Indians*, and some other Nations, made of them in War, are astonishing. Many thousands of them have at once been led to Battle, armed with various Weapons, and taught to exercise their Trunks with a mischievous Dexterity. They were very useful also in throwing down Trees, Houses, Walls, or whatever obstructed the March of an Army. Large wooden Towers also were frequently fixed upon their Backs, capable of containing 15 or 20 Men armed with Spears and Javelins, which from such an Elevation they darted at their Enemies with great Advantage. Yet it frequently happened, that these Creatures occasioned as much Confusion in the Armies to which they belonged, as in those of their Enemies; wherefore the Use of them hath been long laid aside. Many are the Arts and Stratagems made use of to take and tame these Creatures. One I remember to have read, I think, in *Pliny*, as follows. They dig a large Ditch, and putting therein such Food as they know the Beast is fond of, he is attracted by the Smell, and betray'd into the Ditch, from whence he is not able to ascend. Upon this comes a Man with Whips and Cords, who beats and torments him very severely; presently comes another, and seemingly in great Anger, beats and drives away the Man that tormented him, at the same time stroking and soothing the Beast, and then departs. In a little time the first Man returns, and beats and whips him again with great Fury; again his Deliverer also appears, and drives him away: And this is repeated several times, till at length the Beast begins to recognize his Friend, and to show some Signs of Affection, which the Man takes care to improve, by giving him, as he grows hungry, Food to eat, and Water to quench his Thirst; still growing more and more familiar, he at last digs an easy Ascent out of the Ditch, and leads him forth entirely tamed and conquered by Love and Gratitude.

*Of the
Beaver.*

This Creature is about four Feet in Length, and in Breadth twelve or fifteen Inches. His Fur, in the Northern Countries, is generally of a blackish Colour; but in the more temperate Climates,

mates, it brightens into a redish Tincture. He is covered with two sorts of Hair, one long and hardish, the other a soft Down, which is manufactured into Stuffs, Hats, or Stockings. They have a large broad Tail, which is covered with Scales almost like those of a Fish. Both the Male and the Female have two Bags under their Bellies, impregnated with a liquid Substance, called by the Physicians *Castoreum*, and when prepared by the Chymists, *Castor Drops*, or *Tincture of Castor*, &c. It is prescribed as an excellent Remedy against Poisons, Vapours, and many Indispositions. They are found in great Plenty in *Hudson's-Bay*, *New-England*, and *Russia*, which last produce the best *Castoreum*. What is most remarkable in these Creatures is their great Skill as Architects. They build their Apartments (or one may rather call them Towns and Cities, for they associate together in great Numbers) with surprizing Art and Contrivance. When they have found a convenient Situation in the Banks of a River, their next Care is to seek out for proper Timber to support the Roofs of their subterraneous Dwellings. For this Purpose they pitch upon a Tree, perhaps about as thick as a Man's Leg, which they gnaw with their Teeth till they have cut it down. Then they go to work upon the Branches, and break them into Lengths of one, two, or three Feet, according to the Uses they intend them for. And when these, which are the main Joists and Supporters, are disposed according to their Mind, they then weave or wattle them with smaller Twigs, and incrust over the whole with a Plaister or Cement, which serves either to keep out Inundations, or to preserve the Water in Reservoirs for their own Use. Though against Inundations they are generally provided with upper Apartments, which they retire to when the Floods arise, and descend from when the Waters subside.

I will conclude my Lessons to you on the Subject of Animals, with a few Reflections on one, *of the*
which, though it be the most common, is never- *See p.*
theless the most curious, the most innocent, and the most
useful Creature upon the Face of the Earth. You will immediately guess I mean the Sheep: For what other Animal can compare with it in any of those Instances? Of what vast Importance to the Public is the Wool which grows upon its Back, and which is shorn off every Year for the Use of Man! How many thousands of poor People are employed in scouring, carding, combing, and spinning it? How many more in weaving
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it into Cloths, or Stuffs, or Stockings? When these Commodities come into the Hands of the Merchant, they are exported to every Quarter of the Globe, and the richest and the most valuable Products of the whole Earth are brought Home in Exchange for these our Golden Fleeces. Add to this, the many and various Uses that are made of its Skin; either as Parchment to write on; or as Leather for our Wear in Breeches, Gloves, &c. or as a useful Commodity in binding of Books, covering of Sheaths for Swords, Cases for Instruments, and many other Things. And lastly, one might add farther, if it did not favour too much of Ingratitude and Cruelty to so useful, so inoffensive and harmless a Creature, the delicious Food which its Flesh affords for the Nourishment of our Bodies.

And thus I have given you, in as short and plain a Manner as I could, a View as it were in Miniature of some of the principal Things which will meet your Observation in this visible World. I should now, according to my Promise and my Plan, conclude the Whole with some Reflections upon Man, the last and noblest of the Works of God. But this would open a Scene too large for me to expatiate in at present, and perhaps too intricate in some of its Parts for you to follow me. It would lead me first, to consider the Form and Structure of his Body; the Convenience and Fitness of its several Parts for the Offices they are to perform. The Head and Brain to contrive, the Hands to execute, &c. I should also be led to make some Observations on the Five Senses. The curious Structure of the Eye, and the Nature of Vision, or Seeing: the Mechanism of the Ear, and the Doctrine of Sounds and Hearing: the Nose, and its Sense of Smelling: the Palate, and its Tasting: and the delicate Sense of Feeling, which is diffused over the whole Body. I should thence be led to consider the Mind, and the several Powers of Perception, Reflection, and Judgment, or Determination. The great Use and Advantage of Speech or Language, by which Mankind are enabled to communicate their own Thoughts, and to receive distinctly the Thoughts of others, to the Improvement of their own Minds, and the Increase of Knowledge in general. The wonderful Powers of his Imagination and Invention would also be remembered, by which he has been enabled to discover and bring to great Perfection the Sciences of Arithmetic, Geometry, Algebra, Navigation, Mechanics, and all Mathematical Learning. To measure and calculate the

the Distances, Magnitudes, Motions, and Eclipses of all those vast and numberless Bodies that compose this universal Frame. And not only has he been enabled to conceive these great and wonderful Things, but by the noble and useful Invention of Letters and Writing, to perpetuate these his Conceptions, and convey them down from Age to Age, for every succeeding Generation to improve upon to the End of Time. Such and so copious is the Study of Man. I shall therefore leave you to gain a thorough Knowledge of yourself, as you grow in Years and Experience, and happy will you be if you truly attain it, even by the Time you arrive at perfect Manhood.







PART IX.

ON

Moral PHILOSOPHY.





THE
ELEMENTS
OF
Moral PHILOSOPHY.

BOOK I.

PRELIMINARIES.

Μέλις ἐπιμελητέον ὅπως ἕκαστος ἡρών, τῶν ἄλλων Μαθημάτων ἀμελήσας, τότε τῷ Μαθήματι, καὶ τηρήσῃ καὶ μαθήσῃ ἔσται. ἐὰν ποθὲν οἷος τῇ μαθῶν καὶ ἐξευρεῖν τίς αὐτὸν ποιήσει δυνατόν καὶ ἐπισήμονα. BION καὶ ΧΡΗΣΤΟΝ καὶ ΠΟΝΗΡΟΝ διαινώσκοντα, πὺν βελίω ἐκ τῶν δυνατῶν αἰ πάνταχε αἰρεῖσθαι. ἀναλογιζόμενον πάντα, τὰ νῦν δὲ ῥηθέντα, καὶ ξυτιθέμενα ἀλλήλοις, καὶ διαυρεμένα. πρὸς ἀρετήν, βίη πῶς ἔχει. καὶ εἰδέναι τί κάλλος πενία ἢ πλεονεξία, καὶ μετὰ ποίας τινὸς ψυχῆς ἕξεως κακὸν ἢ ἀγαθὸν ἐργάζεται — καὶ πάντα τὰ ποιαῦτα τῶν φύσει πρὸς ψυχὴν ὄντων. καὶ τῶν ἐπιλήτων, τῇ ξυμπεραννύμεναι πρὸς ἄλληλα ἐργάζεσθαι. ὥστε ἐξ ἀπάντων αὐτῶν δυνατόν εἶναι συλλογισάμενον αἰρεῖσθαι. πρὸς τὴν τῆς ΨΥΧΗΣ ΦΥΣΙΝ ἀποστέποντα, πὺν τε χεῖρον καὶ πὺν ἀμείνω BION.

Plus. de Remb. Lib. 10.

HUMAN KNOWLEDGE has been distributed by Philosophers into different Branches, and into more or fewer Divisions, according to the more or less extensive Views, which they have taken of the various Subjects of Human Enquiry.

A great Philosopher * has laid it out into three general Provinces, HISTORY, POETRY, and PHILOSOPHY; which he refers to three several

Powers of the Mind, MEMORY, IMAGINATION, and REASON. *Memory* stores up Facts, or Ideas, which are the Materials of Knowledge. *Imagination* ranges and combines them into different Assemblages or Pictures. *Reason* observes their Differences, Connections, and mutual Relations, and argues concerning them.

The *last* is the proper Business of PHILOSOPHY, which has been defined, the "*Knowledge of what ever exists,*" or the "*Science of Things Human and Divine.*" According to this Definition, its Object comprehends the *Universe* or *Whole of Things*. It traces whatever can be known by Man concerning the *Duty* and his *Works*, their Natures, Powers, Operations, and Connections.

Therefore to give our Definition more Precision, PHILOSOPHY may be defined, the Knowledge of the Universe, or of Nature, and of its Powers, Operations, and Connections, with just Reasonings deduced from thence. *Natural Philosophy* investigates the Properties and Operations of *Body* or *Matter*. *Moral Philosophy* contemplates *Human Nature*, its *Moral Powers* and *Connections*, and from these deduces the Laws of Action; and is defined more strictly the "*Science of MANNERS* or *DUTY*, which it traces from Man's Nature and Condition, and shews to terminate in his Happiness." Therefore it is called *Ethics*, *Disciplina Morum*. In fewer Words, it is the "*Knowledge of our DUTY* and *FELICITY*, or the *Art of being virtuous and happy.*"

It is denominated an ART, as it contains a System of Rules for becoming *virtuous* and *happy*. Whoever practises these Rules, by so doing, attains an habitual Power and Facility of becoming *virtuous* and *happy*. It is likewise called a SCIENCE, as it deduces those Rules from the Principles and Connections of our Nature, and proves that the Observance of them is productive of our Happiness.

It is an ART, and a SCIENCE of the highest Dignity, Importance, and Use. Its Object is Man's Duty, or his Conduct in the several Moral Capacities and Connections which he sustains. Its Office is to direct

* *Vid. Bacon. Aug. Scient. Lib. II. cap. 1.*

Moral PHILOSOPHY. 243

direct that Conduct, to shew whence our Obligations arise, and where they terminate. Its *Use*, or *End*, is the Attainment of Happiness; and the *Means* it employs are Rules for the right Conduct of our *Moral Powers*.

Its End.

Its Means.

As every Art and Science is more or less valuable, as it contributes more or less to our Happiness, this *Moral Art or Science* which unfolds our Duty and Happiness, must be a proper Canon or Standard, by which the Dignity and Importance of every other Art and Science, are to be ascertained. It is therefore pre-eminent above all others; it is that *Master-Art*, that *Master-Science*, which weighs their respective Merit, adjusts their Rank in the Scale of Science, prescribes their Measure, and superintends their Efficacy and Application in Human Life. Therefore *Moral Philosophy* has been honoured with the glorious Epithets of the *Directress of Life*, the *Mistress of Manners*, the *Inventress of Laws and Culture*, the *Guide to Virtue and Happiness*, without some degree of which Man were a Savage, and his Life a Scene of Barbarity and Wretchedness.

The Standard of other Arts and Sciences.

Having thus settled the *Subject* and *End* of the Science, the Elements of which we are attempting to discover, and sufficiently distinguished it from all others, it seems proper next to fix the *Method* of prosecuting it. *Moral Philosophy* has this in common with *Natural Philosophy*, that it appeals to *Nature* or *Fact*; depends on *The Method*. Observation; and builds its Reasonings on plain uncontroverted Experiments, or upon the fullest Induction of Particulars of which the Subject will admit. We must observe, in both these Sciences, *Quid faciat & ferat Natura*; how Nature is affected, and what her Conduct is in such and such Circumstances. Or in other Words, we must collect the *Phænomena*, or *Appearances of Nature* in any given Instance; trace these to some *General Principles*, or *Laws of Operation*; and then apply these *Principles* or *Laws* to the explaining of other *Phænomena*.

Therefore *Moral Philosophy* enquires, not how Man *might have been*, but how he *is constituted*; not into what *Principles*, or *Dispositions* his Actions *may be artfully* resolved, but from what *Principles* and *Dispositions* they *actually* flow; not what he *may*, by Education, Habit or foreign Influence, come to be, or *do*, but what by his *Nature*, or *Original Constituent Principles* he is *formed to be* and *do*. We discover the *Office*, *Use*, or *Destination* of any Work, whether *natural* or

244 *Moral PHILOSOPHY.*

artificial, by observing its Structure, the Parts of which it consists, their Connection or joint Action. It is thus we understand the *Office* and *Use* of a Watch, a Plant, an Eye, or Hand. It is the same with a *Living Creature*, of the *Rational*, or *Brute Kind*. Therefore to determine the *Office*, *Duty*, or *Destination* of *Man*, or in other Words what his *Business* is, or what *Conduct* he is *obliged* to pursue, we must inspect his *Constitution*, take every Part to Pieces, examine their *mutual Relations* one to the other, and the common Effort or Tendency of the Whole.

SECTION I.

Of Man and his Connections.

IN giving a rude Sketch or History in Miniature of *Man*, we must remember that he rises from small Beginnings, unfolds his Faculties and Dispositions by Degrees, as the Purposes of Life require their Appearance, advances slowly through different Stages to Maturity, and when he has reached it, gradually declines till he sinks into the Grave. Let us accompany him in his Progress through these successive Stages, and mark the *Principles* which actuate, and the *Fortunes* which attend him in each, that we may have a full View of him.

Man is born a weak, helpless, delicate Creature, *Man's infant State.* unprovided with Food, Cloathing, and whatever else is necessary for Subsistence, or Defence.

And yet, exposed as the Infant is to numberless Wants and Dangers, he is utterly incapable of supplying the *former*, or securing himself against the *latter*. But though thus feeble and exposed, he finds immediate and sure Resources in the *Affection* and *Care* of his Parents, who refuse no Labours, and forego no Dangers, to nurse and rear up the tender Babe. By these powerful Instincts, as by some mighty Chain, does Nature link the *Parent* to the *Child*, and form the strongest *Moral Connection* on his Part, before the Child has the least Apprehension of it. *Hunger* and *Thirst*, with all the Sensations that accompany or are connected with them, explain themselves by a Language strongly expressive, and irresistibly moving. As the several Senses bring in Notices and Informations of surrounding Objects, we may perceive in
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the young Spectator, early Signs of a growing *Wonder* and *Admiration*. Bright Objects and striking Sounds are beheld and heard with a sort of Commotion and Surprise. But without resting on any, he eagerly passes on from Object to Object, still pleased with whatever is most new. Thus the *Love of Novelty* is formed, and the Passion of *Wonder* kept awake. By degrees he comes acquainted with the most familiar Objects, his Parents, his Brethren, and those of the Family who are most conversant with him. He contracts a *Fondness* for them, is uneasy when they are gone, and charmed to see them again. These Feelings become the Foundation of a *Moral Attachment* on his Side, and by this reciprocal Sympathy he forms the Domestic Alliance with his Parents, Brethren, and other Members of the Family. Hence he becomes interested in their Concerns, and feels *Joy*, or *Grief*, *Hope*, or *Fear* on their Account, as well as his own. As his Affections now point beyond himself to others, he is denominated a *good* or *ill* Creature, as he stands *well* or *ill affected* to them. These then are the first Links of the *Moral Chain*, the early Rudiments, or Out-lines of his Character, his first rude Essays towards Equity, Freedom, Manhood.

When he begins to make Excursions from the Nursery, and extend his Acquaintance abroad, *His Childhood.* he forms a little Circle of Companions, engages with them in Play, or in quest of Adventures; and leads, or is led by them, as his Genius is more or less aspiring. Though this is properly the Season in which *Appetite* and *Passion* have the *Ascendant*, yet his *Imagination* and *Intellectual Powers* open apace; and as the various Images of Things pass before the Mental Eye, he forms Variety of Tastes; relishes some things and dislikes others, as his Parents, Companions, and a thousand other Circumstances lead him to combine agreeable, or disagreeable Sets of Ideas, or represent to him Objects in alluring or odious Lights.

As his Views are enlarged, his *Active* and *Social Powers* expand themselves in Proportion; the *Love of Action*, of *Imitation*, and of *Praise*, *Emulation*, *Curiosity*, *Docility*, a *Passion for Command*, and *Fondness of Change*. His Passions are quick, variable, and pliant to every Impression, his Attachments and Disgusts quickly succeed each other. He compares Things; distinguishes Actions, judges of Characters, and loves or hates them, as they appear well or ill affected to himself, or to those he holds dear. Mean while he soon grows sensible of the Consequences of his own Actions, as they attract Applause, or bring Contempt; he triumphs in the former, and

246 *Moral PHILOSOPHY.*

is ashamed of the latter; wants to hide them, and blushes when they are discovered. By means of these Powers he becomes a fit Subject of Culture, the Moral Tie is drawn closer, he feels that he is accountable for his Conduct to others as well as to himself, and thus is gradually ripening for Society and Action.

As Man advances from *Childhood* to *Youth*, his *His Youth.* Passions as well as Perceptions take a more extensive Range. New Senses of Pleasure invite him to new Pursuits; he grows sensible to the Attractions of Beauty, feels a peculiar Sympathy with the Sex, and forms a more tender kind of Attachment than he has yet experienced. This becomes the Cement of a *new Moral Relation*, and gives a softer Turn to his Passions and Behaviour. In this turbulent Period he enters more deeply into a *Relish of Friendship, Company, Exercises, and Diversions*; the *Love of Truth, of Imitation, and of Design*, grows upon him; and as his Connections spread among his Neighbours, Fellow-Citizens, and Countrymen, his *Thirst of Praise, Emulation, and Social Affections* grow more intense and active. Mean while, it is impossible for him to have lived thus long without having become sensible of those more august Signatures of Order, Wisdom, and Goodness, which are stamped on the visible Creation; and of those strong Suggestions within himself of a Parent-Mind, the Source of all Intelligence and Beauty; and Object as well as Source of that Activity, and those Aspirations which sometimes rouse his inmost Frame, and carry him out of himself to an all-mighty and all-governing Power: Hence arise those Sentiments of *Reverence*, and those Affections of *Gratitude, Resignation, and Love*, which link the Soul with the Author of Nature, and form that most sublime and god-like of all Connections.

Man having now reached his Prime, either new *His Man-* Passions succeed, or the old Set are wound up *hood.* to an higher Pitch. For, growing more sensible of his Connection with the Public, and that particular Community to which he more immediately belongs; and taking withal a larger Prospect of Human Life, and its various Wants and Enjoyments, he forms more intimate Friendships, grasps at Power, courts Honour, lays down cooler Plans of Interest, and becomes more attentive to the Concerns of Society; he enters into Family-Connections, and indulges those Charities which arise from thence. The *reigning* Passions of this Period, powerfully prompt him to provide for the Decays of Life; and in it *Compassion* and *Gratitude* exert their Influence in urging the *Man*, now in full Vigour, to requite the Affection

fection and Care of his Parents by supplying their Wants and alleviating their Infirmities.

At length Human Life verges downwards, and Old Age creeps on apace with its *Anxiety, Love* Old Age.

Ease, Interestedness, Fearfulness, Foresight, and Love of Offspring. The Experience of the Aged is formed direct, and their Coolness to temper the Heat of Youth; the former teaches them to look back on past Follies, and the latter to look forward into the Consequences of Things, and provide against the worst *. Thus every Age has its peculiar Genius and Set of Passions, corresponding to that Period, and most conducive to the Prosperity of the rest. And as are the *Wants* of one Period supplied by the *Capacities* of another, and the *Weaknesses* of one Age tally to the *Passions* of another.

Besides these, there are other Passions and Affections of a less ambulatory Nature, not peculiar to one Period, but belonging to every Age, and existing more or less in every Breast throughout Life. Such are, *Self-Love, Benevolence, Love of Life, Honour, Shame, Hope, Fear, Desire, Aversion, Joy, Sorrow, Anger*, and the like. The two first are Affections of a cooler Strain, one pointing to the Good of the Individual, the other to that of the Species; *Joy and Sorrow, Hope and Fear*, seem to be only Modifications, or different Exertions of the same Original Affections of *Love and Hatred, Desire and Aversion*, arising from the different Circumstances or Position of the Object loved or abhorred, as it is present or absent. From these likewise arise other *Secondary, or Occasional Passions*, which depend, as to their Existence and several Degrees, upon the Original Affections, being gratified or disappointed, as *Anger, Contumace, Confidence, Jealousy, Love, Hatred, Dejection, Exultation, Contentment, Disgust*, which do not form *Leading Passions*, but rather hold of them.

By these simple, but powerful Springs, whether periodical or fixed, the Life of Man, weak and indigent as he is, is preserved and secured, and the Creature is prompted to a constant course of Action, even to supply his own numerous and ever-varying *Wants*, and to guard against the various *Dangers and Evils* to which he is obnoxious. By these Links, Men are connected with each other, formed into Families, drawn into particular Communities, and all united, as by a common

Passions of every Age.

Their joint Effects.

* See *H. r. de Art. Poet.*

League, into one System or Body, whose Members feel and sympathize one with another. By this admirable Adjustment of the Constitution of *Man* to his *State*, and the gradual Evolution of his Powers, Order is maintained, Society upheld, and Human Life filled with that Variety of Passion and Action, which at once enliven and diversify it.

This is a short Sketch of the *Principal Movements* of the Human Mind. Yet, these *Movements* are not the Whole of Man; they impel to Action, but do not direct it; they need a *Regulator* to guide their Motions, to measure and apply their Forces. And accordingly they have one that naturally *superintends* and *directs* their Action. We are conscious of a *Principle* within us, which examines, compares, and weighs Things, notes the Differences, observes the Forces, and foresees the Consequences of Affections and Actions. By this Power we look back on past times, and forward into Futurity, gather Experiences, estimate the real and comparative Value of Objects, lay out Schemes, contrive Means to execute them, and settle the whole Order and Oeconomy of Life. This Power we commonly distinguish by the Name of REASON, or REFLECTION, the Business of which is not to suggest any original Notices or Sensations, but to canvass, range, and make Deductions from them.

We are intimately conscious of another Principle within us, which approves of certain *Sentiments*, *Passions*, and *Actions*, and disapproves of their Contraries. In consequence of the Decisions of this inward Judge, we denominate some Actions and Principles of Conduct, *right*, *best*, *good*, and others *wrong*, *disagreeable*, &c. The former excite our *Esteem*, *Moral Complacency*, and *Affection*, immediately and originally of themselves, without regard to their Consequences, and whether they affect our Interest or not. The latter do as naturally and necessarily call forth our *Contempt*, *Scorn*, and *Aversion*. That Power, by which we perceive this Difference in Affections and Actions, and feel a consequent Relish or Dislike, is commonly called CONSCIENCE, or the MORAL SENSE. Whether such a Power belongs to human Nature or not, must be referred to every one's Experience of what passes within himself.

These Powers
different
from Affec-
tions

These two Powers of *Reason* and *Conscience*, are evidently Principles different in *Nature* and *Kind* from the *Passions* and *Affections*. For the *Passions* are mere *Force* or *Power*, *blind Impulses*,

Impulses, acting violently and without Choice, and ultimately tending each to their respective Objects, without regard to the Interest of the others, or of the whole System. Whereas the *Directing* and *Judging* Powers distinguish and ascertain the different Forces, mutual Proportions and Relations, which the Passions bear to each other and to the Whole; recognize their several Degrees of Merit, and judge of the whole Temper and Conduct, as they respect either the Individual or the Species; and are capable of directing or restraining the blind Impulses of Passion in a due Consistency one with the other, and a regular Subordination to the whole System. — Let this Difference be remembered.

This is some Account of the *Constituent Principles* of our Nature, which, according to their different Mixtures, Degrees, and Proportions, mould our Character and sway our Conduct in Life. In reviewing that large Train of Affections which fill up the different Stages of Human Life, we perceive this obvious Distinction among them; that some of them respect the *Good* of the *Individual*, and others carry us beyond Ourselves to the *Good* of the *Species*, or *Kind*. The former have therefore been called *Private*, and the latter *Public* Affections. Of the first Sort are *Love of Life*, of *Pleasure*, of *Power*, and the like. Of the last are *Compassion*, *Gratitude*, *Friendship*, *Natural Affection*, and the like. Of the *Private* Passions*, some respect merely the *Security* and *Defence* of the Creature, such as *Resentment*, and *Fear*; whereas others aim at some *Positive* Advantage or Good, as *Wealth*, *Ease*, *Fame*. The former Sort therefore, because of this Difference of Objects, may be termed *Defensive* Passions. These answer to our *Dangers*, and prompt us to avoid them if we can, or boldly to encounter them when we cannot.

The other Class of *Private* Passions, which pursue *private positive* Good, may be called *Private or Appetitive*. However we shall still retain the Name of *Private*, in Contradistinction to the *Defensive* Passions. Man has a great Variety of Wants to supply, and is capable of many Enjoyments, according to the several Periods of his Life, and the different Situations in which he is placed. To these therefore, a suitable Train of *Private*

* Here we use Passions and Affections without Distinction. Their Difference will be marked afterwards,

Private Passions correspond, which engage him in the Pursuit of whatever is necessary for his Subsistence, or Welfare.

Our *Public* or *Social* Affections are adapted to the several *Social Connections* and *Relations* which we bear to others, by making us sensible of their

Public Passions. Dangers, and interesting us in their Wants, and so prompting us to secure them against one, and supply the other.

Whether this Historic Draught of *Man*, and *The Appeal.* of that Groupe of Figures and Connections with which he is environed be just or not, is a Matter, not so much of Reasoning, as common Sense and common Experience. Therefore let every one consult his Experience of what he feels within, and his Knowledge of what is transacted abroad, in the *little*, or the *great* World in which he lives; and by that Experience, and that Knowledge, let the Picture be acknowledged *Just*, or pronounced the *Contrary*. For to that Experience, and to that Knowledge, and to these alone the Designer appeals.

This is the first Step then to discover the *Duty* and *Definition* of Man, the having analyzed the Principles of which he is composed. It is necessary, in the next place, to consider in what *Order*, *Proportion*, and *Measure* of these inward Principles, *Virtue*, or a sound Moral Temper, and right Conduct consists; that we may discover whence *Moral Obligation* arises.

S E C T. II.

Of Duty, or Moral Obligation.

The Measure of Power. IT is by the *End* or *Design* of any *Power* or *Movement*, that we must direct its *Motives*, and estimate the *Degree* of Force necessary to its just Action. If it want the Force requisite for the obtaining its End, we reckon it *defective*; if it has too much, so as to be carried beyond it, we say it is *overcharged*; and in either Case it is imperfect, and ill-contrived. If it has just enough to reach the Scope, we esteem it *right*, and as it should be. Let us apply this Reasoning to the Passions.

The

the *Defence* and *Security* of the Individual
 the *Aim* of the *defensive Passions*, that *Se-*
ty and *Defence* must be the *Measure* of their
right or *Indulgence*. If they are so *weak* as
 prove insufficient for that End, or if they
 us beyond it, i. e. raise unnecessary Commotions, or con-
 longer than is needful, they are unfit to answer their ori-
 Design, and therefore are in an unsound and unnatural
 . The Exercise of *Fear* or of *Resentment*, has nothing
 able in it, nor can we give way to either without painful
 tions. Without a certain Degree of them we are naked
 exposed. With too high a Proportion of them we are mil-
 le, and often injurious to others. Thus *Cowardice* or
dity, which is the Excess of *Fear*, instead of saving us in
 ger, gives it too formidable an Appearance, makes us in-
 ble of attending to the best Means of Preservation, and
 ms us of *Courage*, our natural Armour. *Fool-hardiness*,
 h is the Want of a due Measure of *Fear*, leads us heed-
 into Danger, and lulls us into a pernicious Security. *Re-*
e, i. e. *excessive Resentment*, by the Violence of its Com-
 ion, robs us of that *Presence of Mind* which is often the
 Guard against Injury, and inclines us to pursue the Ag-
 or with more Severity than Self-defence requires. *Pusilla-*
ty, or the Want of a just Indignation against Wrong,
 s us quite unguarded, and tends to sink the Mind into a
 ve enervated Tameness. Therefore “ *to keep the defensive*
Passions duly proportioned to our Dangers, is their natural
 itch and Tenour.”

*Measure of
the defensive
Passions.*

The *private Passions* lead us to pursue some
 ive Species of *private Good*. That *Good*
 efore, which is the Object and End of each,
 t be the *Measure* of their respective Force,
 direct their Operation. If they are too
 t or *sluggish* to engage us in the Pursuit of their several
 ects, they are evidently *deficient*; but if they defeat their
 by their *Impetuosity*, then are they strained beyond the
 Tone of Nature. Thus *Vanity*, or an *excessive Passion*
Applause, betrays into such Meannesses and little Arts of
 ularity, as makes us forfeit the Honour we so anxiously
 t. On the other hand, a *total Indifference* about the
 em of Mankind, removes a strong Guard and Spur to
 ue, and lays the Mind open to the most abandoned Prose-
 ons. Therefore, “ *to keep our private Passions and De-*
 “ *fires*

*Measure of
the private
Passions.*

"*fires proportioned to our WANTS, is the just Measure and Pitch of this Class of Affections.*"

The *defensive* and *private* Passions do all agree in general, in their Tendency or Conduciveness to the Interest or Good of the Individual. Therefore when there is a Collision of Interest, as may sometimes happen, that *Aggregate of Good or Happiness*, which is composed of the particular Goods to which they respectively tend, must be the common Standard by which their *comparative Degrees* of Strength are to be measur'd. That is to say, if any of them in the Degree in which they prevail, are incompatible with the greatest Aggregate of Good, or most extensive Interest of the Individual, then are they unequal and disproportionate. For, in judging of a particular *System* or *Constitution* of Powers, we call that the *supreme* or *principal* End, in which the Aims of the several Parts or Powers coincide, and to which they are subordinate; and reckon them in due Proportion to each other, and right with regard to the Whole, when they maintain that Subordination or Subserviency. Therefore, "to proportion our defensive and private Passions in such measure to our Dangers and Wants, as best to secure the Individual, and obtain the greatest Aggregate of private Good or Happiness, is their just Balance, or comparative Standard in Case of Competition."

In like manner, as the *public* or *social* Affections point at the Good of others, that Good must be the Measure of their Force. When a particular *social* Affection, as *Gratitude* or *Friendship*, which belongs to a particular *social Connection*, viz. that of a *Benefactor* or of a *Friend*, is too feeble to make us act the *grateful* or *friendly* Part, that Affection being insufficient to answer its End, is *defective* and *unsound*. If, on the other hand, a particular Passion of this Class counteract or defeat the Interest it is designed to promote, by its Violence or Disproportion, then is that Passion *excessive* and *irregular*. Thus *natural Affection*, if it degenerates into a *passionate Fondness*, not only hinders the Parents from judging coolly of the Interest of their Offspring, but often leads them into a most partial and pernicious Indulgence.

As every kind Affection points at the Good of its particular Object, it is possible there may be sometimes a Collision of Interests or Goods. Thus the Regard due to a *Friend* may interfere with that which we owe to a *Communi-*

ty.

27. In such a Competition of Interests, it is evident, that the *greatest* is to be chosen ; and that is the greatest Interest, which contains the greatest Sum or Aggregate of public Good, greatest in *Quantity* as well as *Duration*. This then is the *common Standard*, by which the respective Forces and Subordinations of the social Affections must be adjusted. Therefore we conclude, that “ this Class of Affections are “ found and regular, when they prompt us to pursue the *Interest* of *Individuals* in an entire Consistency with the *public Good*,” or, in other Words, “ when they are duly proportioned to the *Dangers* and *Wants* of others, and to the “ various *Relations* in which we stand to *Individuals*, or to “ *Society*.”

Thus we have found by an Induction of Particulars, the *natural Pitch* or *Tenour* of the *different Orders of Affection*, considered apart by themselves. Now as the *Virtue* or *Perfection* of every Creature lies in following its Nature, or acting suitably to the just Proportion and Harmony of its several Powers ; therefore, “ the *VIRTUE* of a Creature endow’d “ with such Affections as *Man*, must consist in observing, or “ acting agreeably to their *natural Pitch and Tenour*.” Let this suffice at least for its first rude Sketch.

But, as there are no independent Affections in the Fabric of the Mind, no Passion that stands by itself, without some Relation to the rest, we cannot pronounce of any one considered APART, that it is either *too strong*, or *too weak*. Its Strength and just Proportion must be measured, not only by its Subserviency to its own immediate End, but by the Respect it bears to the whole System of Affection. Therefore, we say a Passion is *too strong*, not only when it defeats its own End, but when it impairs the Force of other Passions, which are equally necessary to form a *Temper of Mind*, suited to a certain *Oeconomy*, or *State* ; and *too weak*, not merely on account of its Insufficiency to answer its End, but because it cannot sustain its *Part* or *Office*, in the Balance of the whole System. Thus the *Love of Life* may be *too strong*, when it takes from the *Regard* due to one’s Country, and will not allow one bravely to encounter Dangers, or even Death on its Account. Again, the *Love of Fame* may be *too weak*, when it throws down the Fences which render *Virtue* more secure, or weakens the Incentives which make it more active and public-spirited.

If it be asked, “ How far may the Affections “ towards private Good or Happiness be in- Limits of
“ indulged ?”

How conformable to Reason.

That such an Ornament of the Mind, and such a Conduct of its Powers and Passions will stand the Test of *Reason*, cannot admit of any Dispute. For, upon a fair Examination into the Consequences of Things, or the Relations and Aptitudes of *Means* to *Ends*, *Reason* evidently demonstrates, and *Experience* confirms it, that, "To have our *defensive* *Passions* duly proportioned to our *Dangers*, is the surest way "to avoid or get clear of them, and obtain the Security we "seek after."—"To proportion our *private* *Passions* to our "Wants, is the best Means to supply them;—and, to adapt "our *public* *Affections* to our *social* *Relations*, and the Good of "others, is the most effectual Method of fulfilling *one*, and "procuring the *other*." In this Sense therefore, *Virtue* may be said to be a "*Conduct* conformable to *Reason*," as Reason discovers an apparent *Aptitude* in such an *Order* and *Oeconomy* of Powers and Passions, to answer the End for which they are *naturally* formed.

Connection between Affections and Ends, not the Idea of Moral Obligation.

If the Idea of *Moral Obligation* is to be deduced merely from this *Aptitude* or *Connection* between certain Passions, or a certain Order and Balance of Passions, and certain Ends obtained, or to be obtained by them, then is *Reason* or *Reflection*, which perceives that Aptitude or Connection, the proper Judge of *Moral Obligation*; and on this Supposition it may be defined, as hath been done by some, the Connection between the *Affection* and the *End*, or which is the same thing, between the *Action* and the *Motive*; for the *End* is the *Motive*, or the *final Cause*, and the *Affection* is the *Action*, or its immediate, natural Cause. A Man, from mere Self-Love, may be induced to fulfil that Obligation, which is founded on the Connection between the *defensive* Passions and their *Ends*, or the *private* Passions and their *Ends*; because in that Case his own Interest will prompt him to indulge them in the due Proportion required. But if he has no Affections which point beyond himself, no Principle but *Self-love*, or some subtle Modification of it, what shall interest him in the Happiness of others, where there is no Connection between it and his own; or what Sense can he have of *Moral Obligation* to promote it? Upon this Scheme therefore, without public or social Affection there could be no *Motive*, and consequently no Moral Obligation to a beneficent, disinterested Conduct.

But

But if the mere Connection between certain Passions, or a certain Order of Passions, and certain Ends, are what constitutes, or gives us the Idea of *Moral Obligation*, then why may not the Appositeness of any Temper or Conduct, nay, of any Piece of Machinery to obtain its End, form an equally strict *Moral Obligation*? For the Connection and Aptitude are as strong and invariable in the latter Instances as in the former. But as this is confounding the most obvious Differences of things, we must trace the Idea of *Moral Obligation* to another and a more natural Source.

Let us appeal therefore to our inmost Sense and Experience, "How we stand affected to those
"different Sets of Passions, in the just Measure
"and Balance of which we found a right Tem-
"per to consist." For this is entirely a Matter of Experience, in which we must examine as in any other natural Enquiry, "What are the genuine Feelings and Operations of Nature, and what Affections or Symptoms of them appear in the given Instance."

*Idea of :
from Expe-
rience.*

The DEFENSIVE Passions, as *Anger* and *Fear*, give us rather Pain than Pleasure, yet we cannot help feeling them when provoked by Injury, or exposed to Harm. We account the Creature imperfect that wants them, because they are necessary to his Defence. Nay we should in some measure condemn ourselves, did we want the necessary Degree of *Resentment* and *Caution*. But if our *Resentment* exceeds the Wrong received, or our *Caution* the Evil dreaded, we then *blame* ourselves for having over-acted our Part. Therefore, while we are in Danger, to be totally destitute of them we reckon a *blameable Defect*, and to feel them in a just, *i. e.* necessary Measure, we *approve*, as suited to the Nature and Condition of such a Creature as Man. But our Security obtained, to continue to indulge them, we not only *disapprove* as *hurtful*, but *condemn* as *unmanly*, *unbecoming*, and *undispirited*. Nor will such a Conduct afford any self-approving Joy, when we coolly reflect upon it.

*Why the de-
fensive Pas-
sions ap-
prove I.*

With regard to the PRIVATE Passions, such as *Love of Life*, *Pleasure*, *Ease*, and the like, as these aim at private Good, and are necessary to the Perfection and Happiness of the Individual, we should reckon any Creature *defective*, and even *blameable*, that was destitute of them. Thus, we condemn the Man who imprudently ruins his Fortune, impairs his Health, or exposes his Life; we not only pity him as an un-

*Why the
Private
Passions*

258 *Moral PHILOSOPHY.*

fortunate Creature, but feel a kind of *Moral Indignation* and Contempt of him, for having made himself such. On the other hand, though a discreet Self-regard does not attract our Esteem and Veneration, yet we *approve* of it in some Degree, in an higher and different Degree from what we would regard a well-contrived Machine, as necessary to constitute a finished Creature, nay to complete the virtuous Character, and as exactly suited to our present indigent State. There are some Passions respecting private Good, towards which we feel higher Degrees of Approbation, as the *Love of Knowledge*, of *Action*, of *Honour*, and the like. We esteem them as Marks of an ingenuous Mind, and cannot help thinking the Character in which they are wanting, remarkably stupid, and in some Degree *immoral*.

With regard to the *SOCIAL Affections*, as *Compassion*, *natural Affection*, *Friendship*, *Benevolence*, and the like, we approve, admire, and love them in ourselves, and in all in whom we discover them, with an Esteem and Approbation, if not different in kind, yet surely far superior in degree to what we feel towards the other Passions. These we reckon necessary, just, and excellently fitted to our Structure and State; and the Creature which wants them we call defective, ill constituted, a kind of Abortion. But the *public Affections* we esteem as self-worthy, originally and eternally amiable. We approve and congratulate ourselves in proportion as we indulge them, and reckon those deserving of our Esteem and Friendship who do so.

But among the *social Affections*, we make an obvious and constant Distinction, *viz.* between those particular Passions, which urge us with a sudden Violence, and uneasy kind of Sensation, to pursue the Good of their respective Objects, as *Pity*, *natural Affection*, and the like; and those calm dispassionate Affections and Desires, which prompt us more steadily and uniformly, to promote the Happiness of others. The former we generally call *Passions*, to distinguish them from the other Sort, which go more commonly by the Name of *Affections*, or *calm Desires*. The *first* kind we approve indeed and delight in, but we feel still higher Degrees of Approbation and moral Complacency towards the *last*, and towards all Limitation of the particular Instincts, by the Principle of *universal Benevolence*. The more Objects the calm Affections take in, and the worthier these are, their Dignity rises in proportion, and with this

our Approbation keeps an exact Pace. A Character, on the other hand, which is quite divested of these public Affections, which feels no Love for the Species, but instead of it, entertains Malice, Rancour, and Ill-will, we reckon totally immoral and unnatural.

Such then are the Sentiments and Dispositions we feel, when these several Orders of Affection pass before the mental Eye.

Therefore, “ that State in which we feel ourselves moved, in the manner above described, towards those Affections and Passions, as they come under the Mind’s Review, and in which we are instantaneously and independently of our Choice or Volition, prompted to a *correspondent* Conduct, we call a State of MORAL OBLIGATION.” Let us suppose, for Instance, a Parent, a Friend, a Benefactor, reduced to a Condition of the utmost Indigence and Distress, and that it is in our Power to give them immediate Relief. To what Conduct are we *obliged*? What *Duty* does Nature dictate and require in such a Case? Attend to Nature, and Nature will tell, will tell with a Voice irresistibly audible and commanding to the *human Heart*, with an Authority which no Man can silence without being self-condemned, and which no Man can elude but at his Peril; “ That immediate Relief *ought* to be given.” Again, let a Friend, a Neighbour, or even a Stranger, have lodged a *Deposit* in our Hands, and after some time reclaim it, no sooner do these Ideas of the Confidence reposed in us, and of Property not *transferred*, but *deposited*, occur, than we immediately and unavoidably feel, and recognize the OBLIGATION to restore it. In both these Cases, we should condemn and even loath ourselves, if we acted otherwise, as having done, or omitted doing what we *ought* not, as having acted beneath the Dignity of our Nature; — contrary to our most intimate Sense of *Right* and *Wrong*; — we should accuse ourselves as *guilty* of Ingratitude, Injustice, and Inhumanity, — and be conscious of deserving the Censure, and therefore dread the Repentment of all rational Beings. — But in complying with the *Obligation*, we feel Joy and Self-approbation, — are conscious of an inviolable Harmony between our Nature and Duty, and think ourselves entitled to the Applause of every impartial Spectator of our Conduct.

To *describe* therefore what we cannot perhaps *define*, a State of MORAL OBLIGATION, is “ that State in which a Creature, endued with

Moral Obligation.

Moral Obligation.

"such *Senses, Powers, and Affections* as *Man*, would condemn himself, and think he deserved the Condemnation of all others, should he refuse to fulfill it, but would approve himself, and expect the Approbation of all others upon complying with it."

And we call him a MORAL AGENT, who is *Moral Agent*. in such a *State*, or is subject to *Moral Obligation*.

Therefore as *Man's Structure and Connections* often subject him to such a *State of Moral Obligation*, we conclude that *he* is a MORAL AGENT. But as *Man* may sometimes act without *knowing* what he does, as in *Cases of Frenzy or Disease*, or in many *natural Functions*; or knowing what he does, he may act without *Choice or Affection*, as in *Cases of Necessity or Compulsion*; therefore to denominate an *Action Moral*, i. e. *approveable, or blameable*, it must be done *knowingly and willingly, or from Affection and Choice*. "A *morally good Action* then is to fulfill a *Moral Obligation* knowingly and willingly." And a *morally bad Action*, or an *immoral Action*, is "to violate a *Moral Obligation* knowingly and willingly." The proposed Brevity of the Enquiry will not admit of entering into the minuter Distinctions of Actions.

Moral Action
good and
bad.

As not an *Action*, but a *Series of Actions* constitute a CHARACTER; as not an *Affection*, but a *Series of Affections* constitute a Temper, and as we denominate Things by the gross, *à fortiori*, or by the Qualities which chiefly prevail in them, therefore we call that a "*morally good Character*, in which a *Series of morally good Actions* prevail;" and that a "*morally good Temper*, in which a *Series of morally good Affections* have the Ascendant." A bad Character and bad Temper are the Reverse. But where the above-mentioned Order or Proportion of Passions is maintained, there a *Series of morally good Affections and Actions* will prevail. THEREFORE, "to maintain that Order and Proportion, is to have a "*morally good Temper and Character*." But a "*morally good Temper and Character*, is MORAL RECTITUDE, INTEGRITY, VIRTUE, or the COMPLETION OF DUTY."

Moral Character and Temper good and bad.

How we come by the Idea of Moral Obligation.

If it be asked after all, "How we come by the Idea of *Moral Obligation or Duty*?" We may answer, that we come by it in the same Way as by our other *original and primary Perceptions*. We receive them all from Nature,

or

or the great Author of Nature. For this Idea of *Moral Obligation*, is not a Creature of the Mind, or dependent on any previous Act of Volition, but arises on certain Occasions, or when certain other Ideas are presented to the Mind, as necessarily, instantaneously, and unavoidably, as *Pain* does upon too near an Approach to the Fire, or *Pleasure* from the Fruition of any Good. It does not, for instance, depend on our Choice, whether we shall feel the *Obligation* to succour a distressed Parent, or to restore a Deposit entrusted to us, when it is recalled. We cannot call this a COMPOUND Idea made up of one or more simple Ideas. We may indeed, nay we must, have some Ideas antecedent to it, *e. g.* that of a Parent—in Distress—of a Child,—able to relieve,—of the Relation of one to the other,—of a Trust,—of Right, &c. But none of these Ideas constitute the Perception of *Obligation*. This is an Idea quite distinct from, and something superadded to, the Ideas of the Correlatives, or the Relation subsisting between them. These indeed, by a Law of our Nature, are the Occasion of suggesting it, but they are as totally different from it, as Colours are from Sounds. By Sense of Reflection we perceive the Correlatives, our Memory recalls the Favours or Deposit we received, the various Circumstances of the Case are Matters of Fact or Experience; but some delicate inward *Organ* or *Power*, or call it what we please, does, by a certain instantaneous Sympathy, antecedent to the cool Deductions of Reason, and independent of previous Instruction, Art, or Volition, perceive the *Moral Harmony*, the living, irresistible *Charms of Moral Obligation*, which immediately interests the correspondent Passions, and prompts us to fulfill its awful Dictates.

We need not apprehend any Danger from the Quickness of its Decisions, nor be frightened, because it looks like *Instinct*, and has been called so. Would we approve one for deliberating long, or reasoning the Matter much at leisure, whether he should relieve a distressed Parent, feed a starving Neighbour, or restore the Trust committed to him? Should we not suspect the Reasoner of Knavery, or of very weak Affections to Virtue? We employ *Reason*, and worthily employ it, in examining the Condition, Relations, and other Circumstances of the Agent or Patient, or of those with whom either of them are connected, or, in other words, the *State of the Case*: And in complicated Cases, where the Circumstances are many, it may require no small Attention to find the true State of the Case; but when the

*The Use of
Reason in
Moral Cases.*

Relations of the Agent or Patient, and the Circumstances of the Action are obvious, or come out such after a fair Trial, we should scarce approve him who demurs on the Obligation to that Conduct which the Case suggests. Thus, suppose one to deposit with us a Sword, which he comes afterwards to reclaim, but in such Circumstances, suppose of Frenzy or Melancholy, as give us good Ground to suspect that he will use it to the Hurt of others, or of himself. In such a Case it belongs to *Reason* or *Prudence*, coolly to weigh every Circumstance, the Condition of the Proprietor, the Consequences of restoring the Deposit, and the like; nor should we on that Supposition, condemn the hesitating about the restoring it; but let the Proprietor return to himself, the Obligation to Restitution being now apparent, we should justly suspect the Demurer of something criminal or knavish.

Infin? con- As to that Objection against this original Per-
sidered. ception of *Moral Obligation*, taken from its being an Instinct or necessary Determination of our Nature; are not the Perceptions or Determinations of Reason equally necessary? Does not every intuitive Perception or Judgment necessarily extort our Assent, when the Agreement or Disagreement of the Ideas which are compared is perceived? *Instinct* indeed has been considered, as something relative merely to bodily *Sense* and *Appetite*, a mere brutal Sensation or Impulse, in which the Mind, or our sublimer Powers have no Part; and therefore it is a Term that has been thought obnoxious to great Exceptions in Morals; but is a moral Power of Perception, or a moral Determination, the worse for being interwoven with the very Frame, and Constitution of our Nature, for being instantaneous, uniform and steady in its Operations or Decision? Why should such a Divine Instinct be thought less rational, less suitable to the Dignity of the Mind, than those intuitive Perceptions which are conversant about abstract Truths, and arise necessarily and instantaneously from the obvious Relations of Things? And if Reason with all its Sagacity may sometimes err, nay often does, why should any other Power of Perception be thought infallible, or be condemned as brutal and irrational if it is not?

Pleasure, not From what has been said it is evident, that
the Idea of it is not the Pleasure, or agreeable Sensations
Obligation. which accompany the Exercise of the several Affections, nor those consequent to the Actions, that constitute MORAL OBLIGATION, or excite in us the Idea of it. That Pleasure is posterior
to

to the Idea of Obligation, and frequently we are obliged, and acknowledge ourselves under an Obligation, to such Affections and Actions as are attended with Pain; as in the Trials of Virtue, where we are obliged to sacrifice private to public Good, or a present Pleasure to a future Interest. We have Pleasure in serving an aged Parent, but it is neither the Perception nor Prospect of that Pleasure, which gives us the Idea of Obligation to that Conduct.

Therefore, when we use these Terms, *Obligation, Duty, Ought*, and the like, they stand for a simple Idea, an original uncompounded Feeling or Perception of the human Mind, as much as any Idea whatsoever, and can no more be defined than any other simple Idea; and this Perception is not a Creature of the Mind, but a Ray emaning directly from the Father of Lights, a fair genuine Stamp of his Hand, who impressed every vital and original Energy on the Mind, or if we chuse rather to say, who ordained those Laws of Perception, by which moral Forms attract and charm us with an irresistible Power.

But because the learned Dexterity of human Wit has so marvellously puzzled a plain and obvious Subject, we shall consider some of those ingenious Theories by which Moralists have deduced and explained *Moral Obligation*.

S E C T. III.

Various Hypotheses concerning Moral Obligation.

FROM the Induction which has been made, we shall be able to judge with more Advantage of the different Hypotheses which have been contrived to deduce the Origin of *Moral Obligation*.

Hobbes, who saw Mankind in an unfavourable Attitude, involved in all the Distraction and Misery of a civil War, seems to have taken too narrow and partial a View of our Nature, and has therefore drawn it in a very odious and uncomfortable Light. Next to the Desire of Self-preservation, he makes the governing Passions in Man, the *Love of Glory*, and of *Power*, and from these, by an arbitrary, unnatural, and unsupported Hypothesis, contrary to common Experience, and common Language, he attempts to deduce all

*The Scheme
of Hobbes.*

the other Passions which inflame the Minds, and influence the Manners of Men. All Men, says he, are by Nature equal, that is to say, according to his own Explanation, the weakest can do as much Mischief as the strongest; all desire, and have an equal Right to the same Things, and want to excel each other in *Power* and *Honour*; but as it is impossible for all to possess the same Things, or to obtain a Pre-eminence in Power and Honour, hence must arise mutual Contentions, a natural Passion to invade the Property, and level the Power and Character of each other, and to raise and secure themselves against the Attempts of others.* This State of Things, in which every Man having a Right to everything, has likewise a Right to prevent his Neighbour by Force or Fraud; he tells us, must naturally produce a State of War and mutual Carnage. In such a State, he adds, nothing can be called unjust or unlawful; for he who has a Right to the End, has also a Right to the only Means of obtaining or securing it, which, according to him, are Force or Fraud. And this State he calls the State of Nature.—But our shrewd Philosopher subjoins, that Men being aware that such a State must terminate in their own Destruction, agreed to surrender their private unlimited Right into the Hands of the Majority, or such as the Majority should appoint, and to subject themselves for the future to common Laws, or to common Judges or Magistrates. In consequence of this Surrender, and of this mutual Compact or Agreement, they are secured against mutual Hostilities, and bound or obliged to a peaceable and good Behaviour; so that it is no longer lawful or just (the good Man means safe and prudent) to invade and encroach on another. For this would be contrary to Compact, and a Violation of his Promise and Faith.—Therefore as there could be no Injustice previous to this Compact, so the Compact, and it alone, must be the Origin of *Justice*, the Foundation of *Duty* and *Moral Obligation*. This is our subtle Philosopher's Scheme!

But one may ask him, What Obligation is a Man under to keep his Promise, or stand to his Compact, if there be no Obligation, no Moral Tie distinct from that Promise, and that Compact, independent of and previous to both? If there is none, they must prove a mere Rope of Sand, and Men are left as loose and unfociable as ever, as much Barbarians and Wolves as before their Union. But if there is a distinct and previous Obligation to Fidelity, Honour, and a Re-

* *Vid.* Hob. *d. Civ.* cap. i, ii, &c. and *Leviath.* c. xvii, &c.

a Regard to one's Engagements, then Right and Wrong, Justice and Injustice are antecedent to Compact.—Perhaps he will tell us that the Necessity of the Case, or a Regard to our own Safety, which is included in that of the Public, obliges us to adhere to our Engagements. We may be compelled or punished for Breach of Faith by those, to whom we transfer our Rights. *Force*, or *superior Strength* of the Majority to controul or punish the Refractory, is, no doubt, the true Origin of the Obligation, if he will speak out, and *Self-love* is its only *Judge* and *Measure*. And if this be all, then what Obligation is a Man under to Gratitude, Charity, Friendship, and all these Duties of Humanity, which fall not under the Cognizance or Controul of Law? What Obligations to private Veracity, Honesty, and Fidelity, when a Man may be a Knave with Safety? That Scheme, therefore, which sets us loose from such Obligations, and involves us in such Absurdities, must be itself both absurd and wicked. That State of Nature which it supposes as its Foundation, is a mere Chimera, a Vision of his own Brain, which, from the Condition and Nature of the Creature, the Growth of a Family, the Rise of a Tribe or Clan, we have no Reason to believe ever subsisted; therefore the Superstructure which he has raised on that Foundation, is fictitious and chimerical. *Hobbes* took it for granted, that all Men were Knaves or Fools, and wanted to dress up a System of Government, agreeable to the corrupt Taste of the reigning Powers, and to the Genius of a most dissolute Court, a Government contrived to make a small Part of Mankind Tyrants, and all the rest Slaves. He measured *Virtue* by *mere Utility*, and while he pretends to be the first that discovered this Connection, and gave the only true Reason for the Practice of Honesty, he seems to have misunderstood, or wilfully overlooked its true Nature, and its inseparable Connection with the Perfection and Happiness of the Individual.

Another Set of Moralists establish Morals upon the Will or positive Appointment of the Deity, and call *Virtue* a Conformity to that Will, or Appointment. All *Obligation*, they say, supposes one who *obliges*, or who has a *Right* to prescribe, and can reward the Obedient, and punish the Disobedient. This can be none but our *Creator*. His *Will* therefore is our *Law*, which we are bound to obey. And this they tell us is only sufficient to bind, or oblige such imperfect and corrupt Creatures as we are, who are but feebly moved with a Sense of the Beauty and Excellency of
Scheme of
Conformity
to the Di-
vine Will.

Virtue.

Virtue, and strongly swayed by Passion, or Views of Interest.

That *Virtue*, or such a Conduct of the Passions as hath been above described, is agreeable to the *Will of God*, is evident beyond Dispute, as that Conduct, or Scheme of Duty is pointed out to us by our Inward Structure, and as that Inward Structure is the Effect of the Will or Appointment of the Deity. Whatever therefore is agreeable, or correspondent to our Inward Structure, must likewise be agreeable, or correspond to the Will of God. So that all the *Indications*, or *Sanctions* of our Duty, which are declared, or enforced by our Structure, are, and may be, considered as *Indications*, or *Sanctions* of the Will of our Creator. If these Indications, through Inattention to, or Abuse of the Structure, prove insufficient to declare; or if these Sanctions, through the Weakness or Wickedness of Men, prove insufficient to enforce Obedience to the Divine Will, and the Deity is pleased to superadd new Indications, or new Sanctions; these additional Indications or Sanctions cannot, and are not supposed by the Assentors of this Scheme, to add any new Duty, or new Moral Obligation; but only a new and clearer Promulgation of our Duty, or a new and stronger Sanction or Motive from Interest, to perform that Duty, and to fulfil that Obligation to which we were bound before. It makes no Difference, as to the Matter of Obligation, after what manner the Will of our Creator is enforced, or declared to us, whether by Word or Writ, or by certain inward Notices and Determinations of our own Mind, arising according to a necessary Law of our Nature.—— By whichever of these Ways we suppose the Divine Will intimated to us, the first Question that naturally occurs to us is, “Why we are obliged to obey the Divine Will?” If it be answered, that he is our *Superior*, and can reward, or punish us, as we are obedient or refractory; this is resting *Obligation* upon the Foot of *Interest*. If we say that he is our *Creator*, and *Benefactor*, and we *ought to obey our Creator*, and be *grateful* to our *Benefactor*, this refers our Obligation to an inward Sense, or Perception that *Obedience* is due to one’s *Creator*, *Gratitude* to one’s *Benefactor*. Upon what other Principle but this, can we connect those *Relations*, and that Obedience and Gratitude, unless we recur to the Principle of Self-interest just now mentioned? If the Scheme of Duty and *Moral* Obligation be thought to rest on too slight a Foundation, when built on Moral Perception, and the Affections of our Nature, because these are found insufficient to bind,

Moral PHILOSOPHY. 267

er to compel Men to their Duty, we fear the same on will militate against this Scheme, since all the De-ns and Sanctions of the Divine Will have not hitherto ir due Effect in producing a thorough and universal ation.

n some speak of the *Will of God*, as the *Rule of Duty*, not certainly mean a blind arbitrary Principle of but such a Principle as is directed by Reason, and d by Wisdom, or a Regard to certain Ends in Pre- to others. Unless we suppose some Principle in the analogous to our *Sense of Obligation*, some antecede- ffection, or Determination of his Nature, to prefer- nds before others, we cannot assign any sufficient, or any possible Reason why he should will one thing more other, or have any Election at all. Whatever there- he Ground of his Choice, or Will, must be the Ground ation, and not the Choice, or Will itself.—That so, appears farther from the common Distinction which and Philosophers make between *Moral* and *Positive* ands and Duties. The *former* they think *obligatory*, ent to Will, or at least to any Declaration of it; er obligatory only in consequence of a positive Ap- ent of the Divine Will. But what Foundation can e for this Distinction, if all Duty and Obligation be the Result of mere Will?

ore refined Tribe of Philosophers have at- l to lay the Foundation of Morals much and on a more large and firm Bottom, ie *Natures* and *Reasons*, the *Truth* and *Senses* and *Affections*, they are vague and precarious; and though re not, yet irrational Principles of Action, nsequently very improper Foundations, on which to e *eternal* and *immutable* Obligations of Morality. ore they talk much of the abstract *Natures* and *Rea-* Things, of eternal Differences, unalterable Relations, s and Unfitnesses resulting from those Relations; and hese eternal Reasons, Differences, Relations, and their ent Fitnesses, they suppose *Moral Obligation* to arise. duct agreeable to them, or, in other words, “*A Cer-* ity to Truth they call *Virtue*, and the Reverse they call

*Scheme of
Truth, of the
Natures and
Reasons of
Things.*

We

See Dr. Clarke, Woolaston, and other eminent Writers.

We perceive the Natures of Things by different Organs, or Senses, and our Reason acts upon them when so perceived, and investigates those Relations which subsist between them, or traces what is true, what is false, what may be affirmed, and what denied concerning them. Thus by Sense or Experience we perceive the Nature or Character of a *Benefactor*, and of a *Beneficiary* (if one may so express it) and upon comparing them together, a third Idea is suggested to us, which we call the Relation between the *Benefactor* and *Beneficiary*; we likewise perceive the Foundation of that Relation, some Benefit received. But are any of these Ideas that which we understand by the *Moral Duty* or *Obligation*, the Idea of *Gratitude* due to the *Benefactor* from the *Beneficiary*? This is evidently a distinct Perception, obvious to some *Sense*, *Organ*, or *Power* of Perception, but not the Result of *Reasoning*. Suppose farther, the *Benefactor* in Prison for a small Debt, and the *Beneficiary* in Affluence, *Reason* may suggest to the latter, that a little Share of his Wealth bestowed on the former, will make a considerable Change in his State to the better; but will Reason, mere Reason, without some Degree of Affection, prompt him to such a well-placed Charity? Or will the Perception of his Relation to his *Benefactor* and of the *Benefit* received, lead him to approve such a Conduct, unless we suppose a Sense or Feeling quite different from that Perception of the intervening Relation, and of the Ground of that Relation? We might, therefore, perceive all the possible Reasons, Relations, and Differences of Things, and yet be totally indifferent to this or that Conduct, unless we were endued with some Sense or Affection, by which we approved and loved *one*, or disapproved and disliked the *other* Conduct. *Reason* may perceive a *Fitness*, or *Aptitude* to a certain *End*, but without some *Sense* or *Affection* we cannot propose, or indeed have any Idea of an *End*, and without an *End* we cannot conceive any *Inducement* to Action.—Therefore before we can understand the Natures, Reasons, and Fitnesses of Things, which are said to be the Foundation of Morals, we must know what Natures are meant, to what Ends they are fitted, and from what Principles or Affections they are prompted to act, otherwise we cannot judge of the Duty required, or of the Conduct becoming that Being whom we suppose under *Moral Obligation*. But let the Natures be once given, and the Relations which subsist among them be ascertained, we can then determine what Conduct will be obligatory to such Natures, and adapted to their Condition and Oeconomy. And to the same

same Natures placed in the same Relations, the same Conduct will be eternally, and invariably proper and obligatory.

To call *Morality* a *Conformity to Truth*, gives no Idea, no Characteristic of it, but what seems equally applicable to *Vice*. For whatever Propositions are predicable of *Virtue*, as, that it flows from good Affection, or is agreeable to the Order of our Nature,—tends to produce Happiness,—is beheld with Approbation, and the like, the contrary Propositions are equally true, and may be equally predicated of *Vice*. What is Truth, but the Conformity of Propositions to the Nature or Existence and Reality of Things? And has not *Vice* its Nature, its Existence, its Adjuncts and Consequences, as much as *Virtue*? And are not Propositions conformable to them *true* Propositions? And therefore is not a Conduct suited to, or significative of such true Propositions, a *true* Conduct, or a Conduct conformable to Truth? Could we understand a Watch-maker, a Painter, or a Statuary talking of their respective Arts, should they tell us, that a Watch, a Picture, or a Statue were good when they were *true*, or done according to Truth, and that their Art lay in adjusting them to Truth? Would they not speak more intelligibly, and more to the Purpose, if they should explain to us their End or Use, and in order to that, shew us their Parts both together and separately, the Bearings and Proportions of those Parts, and their Reference to that End? Is not such a Detail likewise necessary to understand Human Nature, its Duty and End? Will the Truth, the abstract Natures and Reasons, the eternal Relations and Fitnesses of Things, form such a Detail? But suppose it could, yet what *Degree* of *Virtue*, or *Vice*, does Truth admit? *Truth* is a simple, uniform, invariable Thing, incapable of Intension or Remission. But *Virtue* and *Vice* admit of almost infinite Degrees and Variations, and therefore cannot consist of, or be founded upon, a Thing which admits of none. For such as is the Foundation, such must the Superstructure be.

But it is said, that, to deduce *Moral Obligation* from the Constitution of our Nature, and an Inward Sense, is to render it exceedingly precarious and mutable, because Man might have been differently constituted, so as to approve of Treachery, Malice, Cruelty, and then another, or a quite contrary Train of Duties would have been required, or obligatory.

Objection
as at the
Salem in
Section 2.

That Human Nature might have been otherwise constituted than it is, is perhaps true, but that it could have been better constituted, considering

The Answer.
considering

considering its present State and Circumstances, may be justly questioned under his Government, who does every thing in Number, Weight, and Measure, and who has poured Wisdom and Beauty over all his Works. The little Sketch that hath been given of our Nature, shews that it is admirably adapted to our present Condition, and the various Connections we sustain: We could not have subsisted, or at least not have subsisted so well, in such a Condition, nor maintained such Connections, without that successive Train of Powers and Passions with which we are endued. Without them, or with a contrary Set, we must have been miserable. And he who ordained the Condition and settled the Connections, must likewise have ordained that Conduct of Powers, and that Balance of Passions which is exactly proportioned to that Condition and to those Connections. Such an Order of Creatures being supposed, and such a Condition with such Connections being given, such a Conduct as has been traced out, must be eternally and invariably *obligatory* to such Creature so placed and so connected. Had Man been a different Creature, and placed in different Circumstances, a Spider for instance, or an Hound, a different Set of Duties would have then become him; the Web, the Vigilance, the rapacious Conduct of the *former*; the Sagacity, the Love of Game and Swiftness of the *latter*, and the Satisfaction of Appetite, the Propagation and Love of Offspring common to both, would have fulfilled the Destinations of his Nature, and been his proper Business and Oeconomy. But as *Man* is not only a *Sensible*, an *Active*, and a *Social*, but a *Rational*, a *Political*, and a *Religious* Creature, he has a nobler Part to act, and more numerous and more important Obligations to fulfil. And if afterwards, in any future Period of his Duration, he shall be advanced to a superior Station, and take in wider Connections, the Sphere of his Duty, and the Number and Weight of his Obligations, must increase in proportion. Had a Creature therefore, situated and connected as *Man*, been formed with Dispositions to approve of Treachery, Malice, or Cruelty, such a Temper or Constitution would have been evidently destructive of his Happiness. Now if we imagine the Deity prefers some Ends to others, suppose the Happiness of his Creatures to their Misery, he must likewise prefer the Means most adapted to those Ends. *Therefore*, supposing the Deity necessarily Wise, and Good, he could not have implanted in us such Dispositions, or, in other words, could not have annexed Feelings of Approbation to a Conduct so incongruous to our State, and so subversive of our Happiness.

Moral PHILOSOPHY. 271

happiness. Consequently amidst the infinite Variety of possible Constitutions, Vice could never have been *approvable*, and of course, not *obligatory*.—THEREFORE, “The Scheme of Human Nature above proposed rests on the same Foundation as the Divine Wisdom and Goodness, and the Scheme of Moral Obligation erected upon it, must be equally immutable and immortal.” And that the Deity is wise and good, supremely and universally so, Nature cries aloud through all her Works.

But it is farther objected against this Scheme, that Mankind differ strangely in their *Moral Sentiments*, some approving Treachery, *Revenge* and *Cruelty*, nay whole Nations approving Theft, the Exposition of Infants, and many other Crimes of as black a Dye: therefore the *Moral Sense*, recommended as the Judge of Morals, is either not universal, or a very uncertain and fallacious Rule.

*Another
Objection.*

As to that Diversity of Opinion, or rather of Practice, concerning *Moral Obligation*, we can no more conclude from thence, that the internal *Perception*, or *Moral Sense* of *Right* and *Wrong*, is not an Universal, or Certain Standard or Rule of judging in Morals, than we can infer from the different Tastes in Painting, or different Opinions concerning the Merit of the same Performances, that there is no Standard in Painting, no certain and uncontroverted Principle of the Art. In the last, Men appeal from particular Tastes, Manners and Customs, to Nature, as the supreme Standard, and acknowledge that the Perfection of the Art lies in the just Imitation of it; but from a Diversity in Organs, in Capacity, in Education, from Favour, Prejudice, and a thousand other Circumstances, they differ in applying the Rule to particular Instances. The same thing holds in Morals; Men admit the *Rule in general*, and appeal to our *common Nature* and to *common Sense*, nay seldom differ or judge wrong in impartial Cases. When at any time they misapply, or deviate from the received Standard, a fair and satisfying Account may be given of their Variations.

We have heard of States, which allowed Theft, and the Exposition of lame or deformed Children. But in those States there was hardly any Property, all things were common, and to train up a hardy, shifting, sagacious Youth, was thought far preferable to the Security of any private Property. The Exposition of their Children was esteemed the Sacrifice of private Social Affection to the Love of the Public. We need

not doubt but they loved their Children ; but as such Children were accounted useless, and even hurtful to a Commonwealth formed entirely upon a warlike Plan, they reckoned it gallant to prefer the *public*, to the strongest and most endearing *private* Interest. So that their Mistake lay in supposing a real Competition between those Interests, not in disavowing, or divesting themselves of parental Affection ; a Mistake into which they would not have fallen, had they enjoyed a more natural, refined, and extensive System or Policy. In some Countries they put their aged decrepit Parents to Death, but is it because they condemn, or want natural Affection ? No ; but they think it the best Proof of their Affection to deliver them from the Miseries of old Age, which they do not believe can be counter-balanced by all its Enjoyments. In short, neither Cruelty, nor Ingratitude, nor any Action under an immoral Form, are ever approved. *Men reason wrong only* about the Tendency, the Consequences, Materials, and other Circumstances of the Action. It may appear in different Lights or with different Sides, according to the different Views and Opinions of the Consequences which the Moral Spectator or Actor has, or according to his Passions, Habits and other Circumstances ; but still the general Rule is recognized, the Moral Quality or Species is admired, and the Deviation from the Rule condemned and disliked. Thus, Inhumanity is condemned by all, yet Persecution for the sake of religious Opinions is approved, and even practised by some under the Notion of Compassion to the *Souls* of the Sufferers, or to those of others, who, they think, can only *be thus secured* against the Infection of Heresy ; or under the Form of Zeal for the Honour of God, a *Divine* Principle, to which they are persuaded whatever is *Human* ought to stoop : though to every large and well-informed Mind such a Conduct must appear most barbarous and inhuman, with how pious a Name soever it may be sanctified. — No Man approves *Malice*, but to hate a wicked Character, or to resent an Injury, are deemed equally conducive to Private Security, and to Public Good, and appear to the Actors even in their most outrageous Sallies, a noble Contempt of Vice, or a generous Indignation against Wrong. The Highwayman condemns Injustice, and resents the pilfering Knavery of a Brother of the Trade ; but to excuse himself, he says, Necessity has no Law, an honest Fellow must not starve, he has tried the Way of Industry, but in vain ; the prime Law of Self-preservation must be obeyed. — From these, and the like Topics, it appears no hard Matter to account

account for the Diversity of Opinions concerning *Moral Obligation*, viz. from Mistakes about the Tendency of Actions, the Nature of Happiness, or of public and private Good, from the partial Connections Men have formed, from false Opinions of Religions and the Will of God, and from violent Passions, which make them misapply the Rule, or not attend to the Moral Quality as they ought. Therefore by separating what is foreign, and appealing to the true Standard of Nature, as ascertained above, and by observing the Reasons of those Variations which we find sometimes among Individuals, we plainly recognize the Stability of the Rule of Moral Obligation, and discern the Universality of the Sense; and the Variations, instead of being Exceptions against either, rather concur in confirming *us*, and demonstrating the *other*.

From the whole, we may conclude, that the Nature, the Reasons, and the Relations of Things *Conclusion.* would never have suggested to us this simple Idea of *Moral Obligation* without a proper Sense susceptible of it. it is interwoven with the very Frame and Constitution of our Nature, and by it *We* are in the strictest Sense a LAW to Ourselves. Nor is it left to us to trace out this Law by the cool or slow Deductions of *Reason*; far less is this Law the Result of subtle and metaphysical Enquiries into the abstract Natures and Relations of Things; we need not ascend to Heaven to bring it down from thence, nor descend into the Depths to seek it there; it is *within* us, ever present with us, ever active and incumbent on the Mind, and engraven on the Heart in the fair and large Signatures of *Conscience, Natural Affection, Compassion, Gratitude, and Universal Benevolence.*

S E C T. IV.

The FINAL Causes of our Moral Faculties of Perception and Affection.

WE have now taken a *General Prospect* of MAN and of his MORAL POW- *The Survey proposed.*
ERS and CONNECTIONS, and on these erected
a Scheme of DUTY, or MORAL OBLIGA-
TION, which seems to be confirmed by *Experience*, conso-
nant to *Reason*, and approved by his most inward, and most
VOL. II. F sacred

sacred *Senses*. It may be proper in the next Place to take a more particular View of the *Final Causes* of those delicate *Springs* by which he is *impelled* to Action, and of those *Clogs* by which he is restrained from it.—By this Detail we shall be able to judge of their Aptitude to answer their End, in a Creature endued with his *Capacities*, subject to his *Wants*, exposed to his *Dangers*, and susceptible of his *Enjoyments*; and from thence, we shall be in a condition to pronounce concerning the *End* of his *whole Structure*, its *Harmony* with its *State*, and consequently its Subserviency to answer the great and benevolent Intentions of its Author.

In the *Anatomy* of this inward and more elaborate Subject, it will not be necessary to pursue every little Fibre, nor to mark the nicer Complications and various Branches of the more minute Parts. It shall suffice to lay open the larger Vessels and stronger Muscling of this Divine Piece of Workmanship, and to trace their Office and Use in the Disposition of the Whole.

The Supreme Being has seen fit to blend in the Whole of Things a prodigious Variety of discordant and contrary Principles, *Light* and *Darkness*, *Pleasure* and *Pain*, *Good* and *Evil*. There are multifarious Natures, *higher* and *lower*, and many intermediate ones between the wide-distant Extremes. These are differently situated, variously adjusted, and subjected to each other, and all of them subordinate to the Order and Perfection of the Whole. We may suppose *Man*, placed as in a Center amidst those innumerable Orders of Beings, by his *Outward* Frame drawing to the *Material* System, and by his *Inward* connected with the *INTELLECTUAL*, or *Moral*, and of course affected by the *Laws* which govern both, or affected by that Good and that Ill which result from those Laws. In this infinite Variety of *Relations* with which he is surrounded, and of *Contingencies* to which he is liable, he feels strong Attractions to the *Good*, and violent Repulsions or Aversions to the *Ill*. But as Good and Ill are often blended, and wonderfully complicated one with the other; as they sometimes immediately produce and run up into each other, and at other times lie at great Distances, yet by means of intervening Links, introduce one another; and as these Effects are often brought about in consequence of hidden Relations, and general Laws, of the Energy of which he is an incompetent Judge, it is easy for him to mistake *Good* for *Evil*, and *Evil* for *Good*, and consequently he may be frequently attracted by such things as are destructive, or repel

pel such as are salutary. Thus, by the tender and complicated Frame of his Body, he is subjected to a great Variety of Ills, to *Sickness, Cold, Heat, Fatigue*, and innumerable *Wants*. Yet his Knowledge is so narrow withal, and his Reason so weak, that in many Cases he cannot judge, in the way of Investigation, or Reasoning, of the Connections of those Effects with their respective Causes, or of the various latent Energies of Natural Things. He is therefore informed of this Connection by the Experience of certain *Senses*, or *Organs of Perception*, which, by a mechanical instantaneous Motion, feel the *Good* and the *Ill*, receiving Pleasure from *one*, and Pain from the *other*. By these, without any Reasoning, he is taught to attract, or chuse what tends to his Welfare, and to repel and avoid what tends to his Ruin. Thus, by his Senses of *Taste* and *Smell*, or by the *Pleasure* he receives from certain kinds of Food, he is admonished which agree with his Constitution, and by an opposite Sense of *Pain*, he is informed which sorts disagree, or are destructive of it; but is not by means of this instructed in the inward Natures and Constitutions of Things.

Some of those Senses are armed with strong Degrees of *Uneasiness* or *Pain*, in order to urge him to seek after such Objects as are suited to them. And these respect his more immediate and pressing *Wants*; as the Sense of *Hunger, Thirst, Cold*, and the like; which, by their painful Importunities, compel him to provide *Food, Drink, Raiment, Shelter*. Those Instincts by which we are thus prompted with some kind of Commotion or Violence to attract and pursue *Good*, or to repel and avoid *Ill*, we call *Appetites* and *Passions*. By our Senses then we are informed of what is *good* or *ill* to the *Private System*, or the *Individual*; and by our *Private Appetites* and *Passions* we are impelled to one, and restrained from the other.

In consequence of this Machinery and the great Train of Wants to which our Nature subjects us, we are engaged in a continued Series of Occupations, which often require much Application of Thought, or great bodily Labour, or both. The Necessaries of Life, Food, Cloaths, Shelter, and the like, must be provided; Conveniencies must be acquired to render Life still more easy and comfortable. In order to obtain these, Arts, Industry, Manufactures, and Trade are necessary. And to secure to us the peaceable Enjoyment of their Fruits, Civil Government, Policy, and Laws must be contrived, and

Use of Appetites and Passions.

Man's outward State.

276 Moral PHILOSOPHY.

the various Business of public Life carried on : Thus while Man is concerned and busied in making Provision, or obtaining Security for himself, he is by degrees engaged in Connections with a Family, Friends, Neighbours, a Community, or a Common-wealth. Hence arise new Wants, new Interests, new Cares, and new Employments. The Passions of one Man interfere with those of another. Interests are opposed. Competitions arise, contrary Courses are taken. Disappointments happen, Distinctions are made, and Parties formed. This opens a vast Scene of Distraction and Embarrassment, and introduces a mighty Train of Good and Ill, both Public and Private. Yet amidst all this Confusion and Hurry, Plans of Action must be laid, Consequences foreseen, or guarded against, Inconveniencies provided for ; and frequently particular Resolutions must be taken, and Schemes executed, without Reasoning or Delay.

Now what Provision has the Author of our Nature made for this necessitous Condition ? How has he fitted the Actor, Man, for playing his Part in this perplexed and busy Scene ? He has admonished the Individual of *private Good* and *private Ill* by peculiar *Senses*; and urged him by keen *Instincts* to pursue the former and repel the latter. But what Provision, what Security has the Deity made for the Community, the Public ? Who, or what shall answer for his good Behaviour to it ?

Our supreme Parent, watchful for the Whole, has not left himself without a Witness here neither, and hath made nothing imperfect, but all things are double one against another. He has not left Man to be informed, only by the cool Notices of Reason, of the *Good* or *Ill*, the *Happiness* or *Misery* of his Fellow-creatures. He has made him sensible of their Good and Happiness, but especially of their Ill and Misery, by an immediate Sympathy, or quick *Feeling* of *Pleasure* and of *Pain*.

The latter we call PITY or COMPASSION. For the former, though every one, who is not quite divested of Humanity, feels it, in some degree, we have not got a Name, unless we call it CONGRATULATION, or joyful SYMPATHY, or that *Good-humour*, which arises on seeing others pleased or happy. Both these Feelings have been called in general the PUBLIC or COMMON SENSE, Κοινωνικὸν κῦμα, by which we feel for others, and

and are interested in their Concerns as really, though perhaps less sensibly than in our own.

When we see our Fellow-creatures unhappy through the Fault or injury of others, we feel *Resentment*. RESENTMENT or INDIGNATION against the *unjust* Causers of that Misery. If we are conscious that it has happened through our Fault or *injurious* Conduct, we feel SHAME; and both these Classes of *Senses* and *Passions*, regarding *Misery* and *Wrong*, are armed with such sharp Sensations of *Pain*, as not only prove a powerful Guard and Security to the *Species* or *Public System*, against those Ills it may, but serve also to lessen or remove those Ills it does, suffer. Compassion draws us out of ourselves to bear a Part of the Misfortunes of others, powerfully solicits us in their Favour, melts us at Sight of their Distress, and makes us in some degree unhappy till they are relieved from it. It is peculiarly well adapted to the Condition of Human Life, because, as an eminent Moralist* observes, it is much more, and oftener in our Power to do Mischief than Good, and to prevent or lessen Misery than to communicate positive Happiness; and therefore it is an admirable Restraint upon the more *selfish* Passions, or those violent Impulses that carry us to the Hurt of others.

There are other particular *Instincts* or *Passions*, which interest us in the Concerns of *Public Affections*, others, even while we are most busy about our *private* own, and which are strongly attractive of *Good*, and repulsive of *Ill* to them. Such are *Natural Affection*, *Friendship*, *Love*, *Gratitude*, *Desire of Fame*, *Love of Society*, of *one's Country*, and others that might be named. Now as the *Private* Appetites and Passions were found to be armed with strong Sensations of Desire and Uneasiness, to prompt Man the more effectually to sustain Labours, and encounter Dangers in pursuit of those Goods that are necessary to the Preservation and Welfare of the Individual, and to avoid those Ills which tend to his Destruction; in like manner it was necessary, that this *other* Class of Desires and Affections should be prompted with as quick Sensations of Pain, not only to counteract the Strength of their Antagonists, but to engage us in a virtuous Activity for our Relations, Families, Friends, Neighbours, Country. Indeed our *Sense of Right and Wrong* will admonish us that it is our *Duty*, and *Reason* and *Experience* farther assure us, that it is both our *Interest* and best

* Vid. Butler's *Serm. on Compassion*.

278 Moral PHILOSOPHY.

Security to promote the Happiness of others ; but that *Sense*, that *Reason*, and that *Experience*, would frequently prove but weak and ineffectual Prompters to such a Conduct, especially in Cases of Danger and Hardship, and amidst all the Importunities of Nature, and that constant Hurry in which the *Private* Passions involve us, without the Aid of those particular kind Affections, which mark out to us particular Spheres of Duty, and with an agreeable Violence engage and fix us down to them.

It is evident therefore, that those two Classes of Affection, the *Private* and *Public*, are set one against the other, and designed to controul and limit each other's Influence, and thereby to produce a just Balance in the Whole *. In general, the violent Sensations of Pain or Uneasiness which accompany Hunger, Thirst, and the other private Appetites, or too great Fatigue of Mind as well as of Body, prevent the Individual from running to great Excesses in the Exercise of the higher Functions of the Mind, as too intense Thought, in the Search of Truth, violent Application to Business of any kind, and different Degrees of Romantic Heroism. On the other hand, the *finer Senses* of *Perception*, and those *generous Desires* and *Affections* which are connected with them, the *Love of Action*, of *Imitation*, of *Truth*, *Honour*, *Public Virtue*, and the like, are wisely placed in the opposite Scale, in order to prevent us from sinking into the Dregs of the *Animal Life*, and debasing the Dignity of Man below the Condition of Brutes. So that by the mutual Reaction of those opposite Powers, the bad Effects are prevented that would naturally result from their acting singly and apart, and the good Effects are produced which each are severally formed to produce.

The same wholesome Opposition appears likewise in the particular Counterworkings of the *Private* and *Public* Affections one against the other. Thus *Compassion* is adapted to counterpoise the *Love of Ease*, of *Pleasure*, and of *Life*, and to disarm, or to set Bounds to *Resentment* ; and *Resentment* of Injury done to ourselves, or to our Friends who are dearer than ourselves, prevents an effeminate *Compassion* or *Consternation*, and gives us a noble Contempt of Labour, Pain and Death. *Natural Affection*,
Friendship,

* Vid. Hutch. *Conduct of the Passions*, Treat. 1. §. 2.

Friendship, Love of one's Country, nay, Zeal for any particular Virtue, are frequently more than a Match for the whole Train of Selfish Passions. On the other hand, without that late over-ruling Passion of Self-love, and those private Views which are connected with it, the social and tender Affections of the Human Heart would degenerate into the most Dotage, the most torturing Anxiety, and downright Madness.

It is not only are the different Orders or Classes of Affection Checks one upon another, but Passions of the same Classes are mutual Clogs. How many are withheld from the violent Impulses of *Resentment* by *Fear*? And how is *Fear* controuled in its Turn, while *Passions* awaken a mighty *Resentment*? The *Private* Passions often interfere, and therefore moderate the Violence of each other; and a calm SELF-LOVE is placed at their Head, to direct, influence, and controul their particular Actions and Repulsions. The *Public* Affections likewise moderate one the other; and all of them are put under the controul of a calm dispassionate BENEVOLENCE, which acts in like manner to direct and limit their particular Motives.

— Thus, most part, if not all the Passions have a double Aspect, and serve a twofold End. In *one* View they may be considered as *POWERS*, impelling Mankind to a certain Course, with a *Force* proportioned to the *apprehended* Importance of the *Good* they aim at. In *another* View they appear as *WEIGHTS*, balancing the Action of the *Powers*, and controuling the Violence of their Impulses. By means of these *Powers* and *Weights* a natural POISE is settled in the human Breast by its all-wise Author, by which the Creature is tolerably steady and regular in his Course, amidst that Variety of Stages through which it must pass.

Contrasts among those of the same Classes.

But this is not all the Provision which God has made for the Hurry and Perplexity of the human Mind in which Man is destined to act. Amidst the infinite Attractions and Repulsions towards the private and public Good and Ill, Mankind either do not often foresee the *Consequences* or *Tendencies* of all their Actions towards one or other of these, especially where those Tendencies are intricate and in different ways, or those Consequences remote and complicated; or though, by careful and cool Enquiry and the Improvement of their rational Powers, they might bring them out, yet distracted as they are with Business,

Particular Perceptions or Instincts of Approbation.

amused with Trifles, dissipated by Pleasure, and disturbed by Passion, they either have, or can find, no leisure to attend to those Consequences, or to examine how far this or that Conduct is productive of private or public Good on the whole. Therefore were it left entirely to the slow and sober Deductions of Reason to trace those Tendencies and make out those Consequences, it is evident that, in many particular Instances, the Business of Life must stand still, and many important Occasions of Action be lost, or perhaps the grossest Blunders be committed. On this Account the Deity, besides that general Approbation which we bestow on every degree of *kind* Affection, has moreover implanted in Man many particular *Perceptions*, or *Determinations*, to approve of certain *Qualities* or *Actions*, which, in effect, tend to the Advantage of Society, and are connected with private Good, though he does not always see that Tendency, nor mind that Connection. And these *Perceptions*, or *Determinations* do, without Reasoning point out, and antecedent to Views of Interest, prompt to a Conduct beneficial to the *Public*, and useful to the *Private* System. Such is that *Sense of Candor and Veracity*, that *Abhorrence of Fraud and Falshood*, that *Sense of Equity, Justice, Gratitude, Greatness of Mind, Fortitude, Generosity, Decorum*; and that *Disapprobation of Knavery, Injustice, Ingratitude, Meanness of Spirit, Cowardice, Cruelty, and Indolence*, which are natural to the Human Mind. The former of those Dispositions, and the Actions flowing from them, are approved, and those of the latter kind disapproved by us, even abstracted from the View of their Tendency, or Conduciveness to the Happiness or Misery of others, or of ourselves. In one we discern a *Beauty*, a *superior Excellency*, a *Congruity* to the *Dignity* of Man; in the other a *Deformity*, a *Littleness*, a *Debasement* of Human Nature.

Others of an inferior Order with the Good of Society, or the Happiness and Perfection of the Individual, though that Connection is not immediately apparent, which

we behold with real Complacency and Approbation, though perhaps inferior in Degree, if not in Kind, such as *Gravity, Modesty, Simplicity of Deportment, Temperance, prudent Oeconomy*; and we feel some degree of Contempt and Dislike where they are wanting, or where the opposite Qualities prevail. These and the like *Perceptions* or *Feelings* are either different *Modifications* of the *Moral Sense*, or *subordinate* to it, and plainly serve the same important Purpose, being expeditious *Monitors* in the several Emergencies

Emergencies of a various and distracted Life, of what is *right*, what is *wrong*, what is to be *pursued*; and what *avoided*; and, by the pleasant or painful Consciousness which attends them, exerting their Influence, as powerful *Prompters* to a suitable Conduct.

From a slight Inspection of the above-named Principles, it is evident they all carry a friendly Aspect to *Society*, and the *Individual*, and have a more immediate, or a more remote Tendency to promote the *Perfection* or *Good* of both. This Tendency cannot be always foreseen, and would be often mistaken, or seldom attended to by a weak, busy, short-sighted Creature, like Man, both rash and variable in his Opinions, a Dupe to his own Passions, or to the Designs of others, liable to Sicknefs, to Want, and to Error. Principles therefore which are so nearly linked with *private Security* and *public Good*, by directing him, without operose Reasoning, where to find *one*, and how to promote the *other*, and by prompting him to a Conduct conducive to both, are admirably adapted to the Exigencies of his present State, and wisely calculated to obtain the Ends of universal Benevolence.

Their general Tendencies.

It were easy, by considering the Subject in another Light, to shew in a curious Detail of Particulars, how wonderfully the Inside of Man, or that astonishing Train of *Moral Powers* and *Affections* with which he is endued, is fitted to the several Stages of that *Progressive* and *Probationary* State, through which he is destined to pass. As our Faculties are narrow and limited, and rise from very small and imperfect Beginnings, they must be improved by Exercise, by Attention, and repeated Trials. And this holds true, not only of our *Intellectual*, but of our *Moral* and *Active* Powers. The former are liable to Errors in Speculation, the latter to Blunders in Practice, and both often terminate in Misfortunes and Pains. And those Errors and Blunders are generally owing to our Passions, or to our too forward and warm *Admiration* of those partial *Goods* they naturally pursue, or to our *Fear* of those partial *Ills* they naturally repel. Those Misfortunes therefore lead us back to consider where our Misconduct lay, and whence our Errors flowed, and consequently are salutary Pieces of Trial which tend to enlarge our Views, to *correct* and *refine* our Passions, and consequently improve both our *Intellectual* and *Moral* Powers. — Our Passions then are the rude Materials of our Virtue, which Heaven has given us to work up, to refine and polish into

Passions fitted to a State of Trial.

an harmonious and divine Piece of Workmanship. They furnish out the whole Machinery, the Calms and Storms, the Lights and Shades of Human Life. They show Mankind in every Attitude and Variety of Character, and give *Virtue* both its Struggles and its Triumphs. To conduct them well in every State is *Merit*; to abuse or misapply them is *Demerit*. By them we prove what we are, and by the Habits to which they give Birth, we take our Form and Character for the successive Stages of our Life, or any future Period of our Existence.

To a Pro-
gressive
State.

The different Sets of *Senses, Powers, and Passions*, which unfold themselves in those successive Stages, are both necessary and adapted to that rising and progressive State. Enlarging Views and growing Connections require new Passions and new Habits; and thus the Mind, by these continually expanding and finding a progressive Exercise, rises to higher Improvements, and pushes forward to Maturity and Perfection.—But on this we cannot farther insist.

Harmony of
our Struc-
ture and
State.

In this beautiful Oeconomy and Harmony of our Structure, both outward and inward, with that State, we may at once discern the great Lines of our Duty traced out in the fairest and brightest Characters, and contemplate with Admiration a more august and marvellous Scene of Divine Wisdom and Goodness laid in the Human Breast, than we shall perhaps find in the whole Compass of Nature.

Result.

“What a Piece of Work is Man! How noble in Reason! How infinite in Faculties! In Form and Moving how express and admirable! In Action how like an Angel! In Apprehension how like a God! The Beauty of the World! The Paragon of Animals!”

In what
Oeconomy
Virtue con-
sists.

From this Detail it appears, that MAN, by his Original Frame, is made for a *temperate, compassionate, benevolent, active, and progressive* State. He is strongly *attractive* of the *Good*, and *repulsive* of the *Ills*, which befall others as well as himself. He feels the highest *Approbation* and *Moral Complacency* in those Affections, and in those Actions which immediately and directly respect the *Good* of others, and the highest *Disapprobation* and *Abhorrence* of the contrary. Besides these, he has many particular *Perceptions* or *Instincts* of *Approbation*, which though perhaps not of the same kind with the others, yet are accompanied with

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Moral PHILOSOPHY. 283

respondent Degrees of Affection, proportioned to their active Tendencies to the *Public Good*. THEREFORE, acting agreeably to these Principles, *Man* acts agreeably his Structure, and fulfils the benevolent Intentions of its Author. But we call a Thing GOOD, when it answers its End, and a Creature GOOD, when he acts in a *Conformity* to his *Constitution*. Consequently, *Man* must be denominated GOOD or VIRTUOUS, when he acts suitably to the *Principles* of his *Destitution* of his Nature. And where his VIRTUE lies, there also is his RECTITUDE, his DIGNITY, and PERFECTION to be found. And this coincides with the Account of the former given, but presents it in another Attitude, or it in a Light something different.



THE

THE
ELEMENTS
OF
Moral PHILOSOPHY.

BOOK II. SECT. I.

The principal Distinctions of Duty or Virtue.

WE have now considered the *Constitution* and *Connections* of *Man*, and on those erected a general System of DUTY, or MORAL OBLIGATION, consonant to *Reason*, approved by his most sacred and intimate *Sense*, suitable to his *mixed Condition*, and confirmed by the *Experience* of Mankind. We have also traced the FINAL CAUSES of his *Moral Faculties* and *Affections* to those noble Purposes they answer with regard both to the *private* and the *public System*.

General Division of Duty.

From this Induction it is evident, that there is *one* Order or Class of Duties which *Man* owes to HIMSELF. *Another* to SOCIETY. And a *third* to GOD.

Duties to one's self.

The Duties he owes to HIMSELF are founded chiefly on the DEFENSIVE and PRIVATE Passions, which prompt him to pursue whatever tends to *private Good* or *Happiness*, and to avoid, or ward off whatever tends to *private Ill* or *Misery*. Among the various Goods which allure and solicit him, and the various Ills which attack or threaten him, "To be intelligent and accurate in selecting *one*, and rejecting the *other*, or in preferring the most *excellent Goods*, and avoiding the most *terrible Ills*, when there is a Competition among either, and to be discreet in using the best
" Means

"Means to attend the *Goods* and avoid the *Ills*, is what we call PRUDENCE." This, in our *inward* Frame, corresponds to *Sagacity*, or *Quickness of Sense* in our *outward*.—"To proportion our DEFENSIVE *Passions* to our *Dangers*, we call FORTITUDE;" which always implies "a just Mixture of calm *Resentment* or *Animosity*, and well-governed *Caution*." And this *Firmness of Mind* answers to the *Strength* and *Muscling* of the *Body*.—And "duly to adjust our PRIVATE *Passions* to our *Wants*, or to the respective Moment of the Good we affect or pursue, we call TEMPERANCE;" which does therefore always imply in this large Sense of the Word, "a just Balance or Command of the *Passions*," and answers to the *Health* and *sound Temperament* of the *Body*. *

The second Class of Duties arises from the PUBLIC or SOCIAL *Affections*, "the just *Har-* Duties to
mony or Proportion of which to the *Dan-* Society.
gers and *Wants* of others, and to the *seve-*
ral *Relations* we bear, commonly goes by the Name of
"JUSTICE." This includes the Whole of our Duty to
Society, to its *Parent*, and the *general Polity* of *Nature*; particularly *Gratitude*, *Friendship*, *Sincerity*, *Natural Affection*, *Benevolence*, and the other *social Virtues*: This being the noblest Temper and fairest Complexion of the Soul, corresponds to the Beauty and fine Proportion of the Person. The Virtues comprehended under the former Class, especially *Prudence* and *Fortitude*, may likewise be transferred to this; and according to the various Circumstances in which they are placed, and the more confined or more extensive Sphere in which they operate, may be denominated PRIVATE, OECONOMICAL, or CIVIL *Prudence*, *Fortitude*, &c. These direct our Conduct with regard to the *Wants* and *Dangers* of those lesser or greater Circles with which they are connected.

The third Class of Duties respects the DEITY, and arises from the PUBLIC *Affections*, and the Duties to
several glorious RELATIONS which he sustains to us, as our *Creator*, *Benefactor*, *Law-giver*, *Judge*, &c. God.

We chose to consider this Set of Duties in the last Place, because, tho' prior† in Dignity and Method. Excellency, they seem to be last in Order of Time, as thinking it the most simple and easy Method to follow the gradual Progress of Nature, as it takes its Rise from

† *Vid. Tim. Lect. de Anima Mundi.*

from Individuals, and spreads through the *social System*, and still ascends upwards, till at length it stretches to its all-mighty Parent and Head, and so terminates in those Duties which are *highest and best*.

The Duties resulting from these *Relations*, are
Piety. *Reverence, Gratitude, Love, Respect, Dependence, Obedience, Worship, Praise*; which, according to the Model of our finite Capacities, must maintain some sort of Proportion to the Grandeur and Perfection of the Object whom we venerate, love and obey. "This PROPORTION or HARMONY, is expressed by the general Name of "PIETY or DEVOTION," which is always stronger or weaker, according to the greater or less apprehended Excellency of its Object. This sublime Principle of Virtue, is the enlivening Soul which animates the *Moral System*, and that Cement which binds and sustains the other Duties which *Man* owes to himself or to *Society*. From hence, as will appear afterwards, they derive not only the firmest Support, but their highest Relief and Lustre.

This then is the general Temper and Constitution of Virtue, and these are the principal Lines or Divisions of Duty. To those good Dispositions, which respect the several Objects of our Duty, and to all Actions which flow from such Dispositions, the Mind gives its Sanction or Testimony. And this Sanction or Judgment concerning the Moral Quality, or the Goodness of Actions or Dispositions, Moralists call CONSCIENCE. When it judges of an Action that is to be performed, it is called an *antecedent* Conscience; and when it passes Sentence on an Action which is performed, it is called a *subsequent* Conscience.
Goodness of an Action, The Tendency of an Action to produce Happiness, or its external Conformity to a Law, is termed its *material* Goodness. But the good Dispositions from which an Action proceeds, or its Conformity to Law in every respect, constitutes its *formal* Goodness.
Formal,

Some Moralists of no mean Figure, reckon it necessary to constitute the *formal* Goodness of an Action, "that we reflect on the Action "with Moral Complacency and Approbation. "For mere *Affection*, or a *good Temper*, whether it respects "others, or ourselves, they call *natural* or *instinctive* Goodness, of which the Brutes are equally capable with Man. "But when that Affection or Temper is view'd with Approbation, and made the Object of a new Affection, "this,

“ this, they say, constitutes MORAL GOODNESS or VIRTUE, “ in the strict Sense of the Word, and is the Characteristic of “ MORAL or RATIONAL Agents.”

It must be acknowledged, that Men may be partially good, *i. e.* may indulge some kind Affections, and do some kind Actions, and yet may be vitious or immoral on the Whole. Thus a Man may be affectionate to his Child, and injurious to his Neighbour; or compassionate to his Neighbour, and cruel to his Country; or zealous for his Country, yet inhuman to Mankind. It must also be acknowledged, that to make every Degree and Act of good Affection the frequent Object of our Attention,—to reflect on these with Moral Approbation and Delight,—to be convinced, on a full and impartial Review, that *Virtue* is most amiable in itself, and attended with the most happy Consequences, is sometimes a great Support to Virtue, in many Instances necessary to complete the virtuous Character, and always of use to give Uniformity and Stability to virtuous Principles, especially amidst the numberless Trials to which they are exposed in this mixed Scene of human Life. Yet how many of our Fellow-creatures do we esteem and love, who perhaps never coolly reflected on the Beauty or fair Proportions of Virtue, or turned it into a Subject of their Moral Approbation and Complacency! Philosophers, or contemplative Men, may very laudably amuse themselves with such charming Theories, and often do contemplate every the minutest Trace of Virtue about themselves, with a parental Fondness and Admiration, and by those amiable Images reflected from themselves, they may perhaps be confirmed in the Esteem of whatever is honest and praise-worthy. However, it is not generally among this recluse Set of Men, that we expect to find the highest Flights of Virtue; but rather among Men of Action and Business, who, through the Prevalence of a natural good Temper, or from generous Affections to their Friends, their Country, or Mankind, are truly and transcendently good. Whatever that Quality is which we approve in any Action, and count worthy our Esteem, and which excites an Esteem and Love of the Agent, we call the *Virtue*, *Merit*, or *formal Goodness* of that Action. And if Actions invested with such a Quality, have the Ascendant in a Character, we call that Character *virtuous* or *good*. Now it is certain, that those Qualities or Principles mentioned above, especially those of the public and benevolent kind, how simple, how instinctive soever, are viewed with Ap-
probation

*Whether Ap-
probation is
necessary to
complete the
Idea of Vir-
tue.*

probation and Love. The very Nature of that Principle we call *Conscience*, which approves these benevolent Affections, and whatever is done through their Influence, intimates that *Virtue* or *Merit* is present in the Mind before Conscience is exercised, and that its Office is only to observe it there, or to applaud it. For if Virtue is something that deserves our Esteem and Love, then it must exist before *Conscience* is excited, or gives its Testimony. Therefore to say that the Testimony of Conscience is necessary to the *Being* or *Form* of a virtuous Action, is, in plain Terms, to affirm that *Virtue* is not *Virtue*, till it is reflected on and approved as Virtue. The proper Business of *Reason*, in forming the *virtuous Character*, is to guide the several Affections of the Mind to their several Objects, and to direct us to that Conduct, or to those Measures of Action, which are the most proper Means of acquiring them. Thus, with respect to *Benevolence*, which is the *Virtue* of a *Character*, or a principal Ingredient of *Merit*, its proper Object is the *public Good*. The Business of Reason then is to inform us wherein *consists the greatest public Good*, what Conduct and which Actions are the most effectual Means of promoting it. After all, the Motions of the Mind are so quick and imperceptible, and so complicated with each other, that perhaps seldom do any indulge the virtuous or good Affections without an approving Consciousness; and certainly the more that Virtue is contemplated with Admiration and Love, the more firm and inflexible will the Spectator be in his Attachment to it.

When the Mind is ignorant or uncertain
Divisions of about the Moment of an Action, or its Ten-
Conscience. dency to private or public Good, or when
 there are several Circumstances in the Case,
 some of which being doubtful, render the Mind dubious concerning the Morality of the Action, this is called a *doubtful* or *scrupulous* Conscience; if it mistakes concerning these, it is called an *erroneous* Conscience. If the *Error* or *Ignorance* is *involuntary* or *inevitable*, the Action proceeding from that *Error*, or from that *Ignorance*, is reckoned *innocent*, or not *imputable*. If the Error or Ignorance is *positive* or *criminal*, i. e. the Effect of Negligence, or of Affliction and wilful Inadvertence, the Conduct flowing from such Error, or such Ignorance, is *criminal* and *imputable*. Not to follow one's Conscience, tho' erroneous and ill-informed, is *criminal*, as it is the Guide of Life; and to counteract it, flows a depraved and incorrigible Spirit. Yet to follow an erroneous Conscience is likewise criminal, if that Error which misled
 the

Moral PHILOSOPHY. 289

Conscience was the Effect of Inattention, or of any criminal Passion. *

it be asked, "How an erroneous Conscience shall be rectified, since it is supposed to be the only Guide of Life, and Judge of Morals?" *How Conscience is to be rectified.*
 Answer, in the very same Way that we should rectify Reason, if at any time it should go wrong, as it often does, viz. By giving it proper and sufficient Materials for judging right, i. e. by enquiring into the whole State of the Case, the Relations, Connections, and moral Obligations of the Actor, the Consequences, and other circumstances of the Action, or the Surplusage of private or public Good which results, or is likely to result, from the Commission or from the Omission of it. If those Circumstances are fully and fully stated, the Conscience will be just and impartial in its Decision. For, by a necessary Law of our Nature, it approves, and is well affected to the Moral Form; and if it is to approve of Vice or Immorality, it is always under the influence or Mask of some Virtue. So that strictly speaking, it is not Conscience which errs; for its Sentence is always conformable to the View of the Case which lies before it; it is just, upon the Supposition that the Case is truly such as is represented to it. All the Fault is to be imputed to the Agent, who neglects to be better informed, or who, through Ignorance or Wickedness, hastens to pass Sentence from an imperfect Evidence. Thus, he who persecutes another for the sake of Conscience, or a Mistake in religious Opinion, does not approve of Injustice, or Cruelty, any more than his mistaken Neighbour who suffers by it; but, thinking the Severity he uses conformable to the Divine Will, or salutary to the Patient, or at least to the Society of the Faithful, whose welfare he reckons far preferable not only to the Interest of himself, but to all the vast Remainder of Mankind; and being withal, that Severity is the only Means of securing the highest Interest, he passes a Sentence as just, and consequential from those Principles, as a Physician, who to save the whole Body, orders the Amputation of a gangren'd Limb, thinking that the only Remedy. Perhaps, in the latter Case, a skilful Practitioner might have accomplish'd the Cure by a less dangerous Operation; and in the former, a better Casuist, or a wiser Master in spiritual Medicine, might have contrived a more full, as sure, and much more innocent.

OL. II.

U

Having

* Vid. Hutches. Moral Instit. Lib. ii. cap. 3.

Having now given the general Divisions of *Duty* or *Virtue*, which exhibit its different Faces and Attitudes, as it stands directed to its respective Objects, let us next descend into Particulars, and mark its more minute Features and Proportions, as they appear in the Detail of human Life.

S E C T. II.

Of Man's Duty to HIMSELF. Of the Nature of GOOD, and the CHIEF GOOD.

Directions of **E**VERY Creature, by the Constitution of his Nature, is determined to love himself, to pursue whatever tends to his Preservation and Happiness, and to avoid whatever tends to his Hurt and Misery. Being endued with Sense and Perception, he must necessarily receive *Pleasure* from some Objects, and *Pain* from others. Those Objects which give Pleasure are called *good*, and those which give Pain, *evil*. To the former he feels that Attraction or Motion we call *Desire*, or *Love*: to the latter that Impulse we call *Aversion*, or *Hatred*. To Objects which suggest neither Pleasure nor Pain, and are apprehended of no Use to procure one, or ward off the other, we feel neither *Desire* nor *Aversion*, and such Objects are called *indifferent*. Those Objects which do not of themselves produce Pleasure or Pain, but are the *Means* of procuring either, we call *useful* or *noxious*. Towards them we are affected in a subordinate manner, or with an *indirect* and *reflective*, rather than a *direct* and *immediate* Affection. All the original and particular Affections of our Nature, lead us out to, and ultimately rest in, the first kind of Objects, viz. those which give immediate Pleasure, and which we therefore call *good*, *directly* *so*. The calm Affection of *Self-love* alone is conversant about such Objects as are only *consequently* *good*, or merely useful to ourselves.

But besides those Sorts of Objects which we *Moral Good*. call good, merely and solely as they give Pleasure, or are Means of procuring it, there is an higher and nobler Species of Good, towards which we feel that peculiar Movement we call *Approbation* or *Moral Complacency*, and which we therefore denominate *Moral Good*. Such

Such are our Affections, and the consequent Actions to them. The Perception of this is, as has been already observed, quite distinct in kind from the Perception of other Species; and though it may be connected with *Pleasure* or *Advantage* by the benevolent Constitution of Nature, yet it constitutes a Good independent of that Pleasure and that Advantage, and far superior not in Degree only, but in Dignity to both. The other, viz. the *Natural Good*, consists in obtaining those Pleasures which are adapted to the peculiar Senses and Passions susceptible of them, and is as various as are those Senses and Passions. This, viz. the *Moral Good*, lies in the right Conduct of the several Senses and Passions, or their just Proportion and Accommodation to their respective Objects and Relations; and this is of a more simple and invariable kind.

By our several Senses we are capable of a great Variety of pleasing Sensations. These constitute distinct Ends, or Objects ultimately pursuable for their own Sake. To these Ends, or ultimate Objects, correspond peculiar Appetites or Affections, which prompt the Mind to pursue them. When these Ends are attained, there it rests, and looks no farther. Whatever therefore is pursuable, not on its own Account, but as subservient or necessary to the Attainment of something else that is intrinsically valuable or for its own Sake, be that Value ever so great, or ever so small, we call a *Mean*, and not an *End*. So that *Ends*, and *Means*, constitute the *Materials*, or the very *Essence* of our *Happiness*. Consequently Happiness, i. e. human Happiness, cannot be one simple uniform Thing, in Creatures constituted as we are, with such various Senses of Pleasure, or such different Capacities of Enjoyment. Now the same Principle, or Law of our Nature, which determines us to pursue any one End, or Species of Good, prompts us to pursue every other End, or Species of Good of which we are susceptible, or to which our Maker has adapted an original Propension. But amidst the great Multiplicity of *Ends* or *Goods*, which form the various Ingredients of our Happiness, we perceive an evident *Gradation* or *Subordination*, suited to that Gradation of *Senses*, *Powers*, and *Passions*, which prevails in our mixed and various Constitution, and to that ascending Series of Connections, which open upon us in the different Stages of our progressive State.

Thus the Goods of the *Body*, or of the *external Senses*, seem to hold the lowest Rank in this Gradation or Scale of Goods. These we have in common with the Brutes; and though many Men are brutish enough to pursue the Goods of the Body with a more than brutal Fury; yet when at any time they come in Competition with Goods of an higher Order, the unanimous Verdict of Mankind, by giving the last the Preference, condemns the first to the meanest Place. Goods consisting in exterior social Connections, as *Fame*, *Fortune*, *Power*, *Civil Authority*, seem to succeed next, and are chiefly valuable as the Means of procuring *natural* or *moral* Good, but principally the latter. Goods of the *Intellect* are still superior, as *Taste*, *Knowledge*, *Memory*, *Judgment*, &c. The highest are *moral* Goods of the Mind, directly and ultimately regarding ourselves, as *Command of the Appetites* and *Passions*, *Prudence*, *Fortitude*, *Benevolence*, &c. These are the great Objects of our Pursuit, and the principal Ingredients of our Happiness. Let us consider each of them, as they rise one above the other in this natural Series or Scale, and touch briefly on our Obligations to pursue them.

The Brevity of this Work will not permit us minutely to weigh the *real* or *comparative* Moment of the different kinds of Goods, which offer themselves to the Mind, or to scrutinize the particular Pleasures of which we are susceptible either as to *Intenseness*, or *Duration*, and the Enjoyment of which depends on Accidents rather than our own Attention and Industry. We shall therefore confine ourselves to the Consideration of such Goods as lie properly within our own Sphere, and being the Objects of our Attention and Care, fall within the Verge of *Duty*.

Those of the Body are *Health*, *Strength*, *Agility*, *Hardiness*, and *Patience of Change*, *Neatness* and *Decency*.

Good Health, and a regular easy Flow of Spirits, are in themselves sweet natural Enjoyments, a great Fund of Pleasure, and indeed the proper Seasoning which gives a Flavour and Poignancy to every other Pleasure. The Want of Health unfits us for most Duties of Life, and is especially an Enemy to the social and human Affections, as it generally renders the unhappy Sufferer peevish and sullen, disgusted at the Allotments of Providence, and consequently apt to entertain suspicious and gloomy Sentiments of its Author. It obstructs the free Exercise and full Improvement of our Reason, makes

Moral PHILOSOPHY. 293

Burthen to our Friends, and useless to Society. Whereas uninterrupted Enjoyment of good Health, is a constant source of good Humour, and good Humour is a great Friend to Innocence and Benignity of Heart, enables us to encounter various Ills and Disappointments of Life with more Courage to sustain them with more Patience, and in short, enables much, if we are otherwise duly qualified, to our Part, in every Exigency of Life, with more Firm-Consistency, and Dignity. Therefore it imports us much to preserve and improve an Habit of Enjoyment, without which no other external Entertainment is tasteless, and most other pleasures of little Avail. And this is best done by strict Temperance in Diet and Regimen, regular Exercise, and by keeping the Mind easy and unruffled by violent Passions, and unimpeded by intense and constant Labours, which would impair, and gradually destroy, the strongest Constitu-

How preserved.

Strength, Agility, Hardiness, and Patience of Mind, suppose Health, and are unattainable without it; but they imply something more, and are necessary to guard it, to give us the perfect Use of our Mind and Limbs, and to secure us against many otherwise unavoidable Ills. The Exercise of the necessary manual, and of the elegant, Arts of Life, depends on Strength and Agility of Body; personal Dangers, private and public, the Demands of our Friends, our Families and Country, require them; they are necessary in War, and ornamental in Peace; fit for the Employments of a Country and a private Life, and they exalt the Entertainments and Pleasures of both. They are chiefly obtained by moderate and regular Exercise.

Strength, Agility, &c.

How attained.

We are so much raised above Want and Dependence, or so exempted from Business and Cares, as not to be often exposed to Inequalities and Changes of Diet, Exercise, Air, Climate, and other Irregularities. Now what can be so effectual to cure one against the Mischiefs arising from such unavoidable Alterations, as Hardiness, and a certain Versatility of Constitution, which can bear extraordinary Labours, and submit to great Changes, without any sensible Discomfort or bad Consequences. This is best attained, not by an over-great Delicacy and exclusive Attention to Forms, or by an invariable Regularity in Diet, Hours, and Way of Living, but rather by

Patience of Change.

How attained.

by a bold and direct Imitation of Regimen. Besides, Deviations from established Rules and Forms of Living, if kept within the Bounds of Sobriety and Reason, are friendly to Thought and critical Sentiment, animate the dull Scene of ordinary Life and Business, and agreeably stir the Passions, which stagnate or breed ill Humour in the Calms of Life.

Nobility, Cleanliness, and Decency, to which we now add *Dignity of Countenance*, and *Decorum*, &c. seem to have something refined and moral in them. At least we generally esteem

them Indications of an orderly, genteel, and well-governed Mind, conscious of inward Worth, or the Respect due to one's Nature. Whereas *Neatness, Sordidness, Awkwardness, and Indecency*, are shrewd Symptoms of something mean, coarse, and deficient, and betray a Mind untaught, illiberal, and ignorant of what is due to one's self or to others. How much Cleanliness and neatness to Health needs hardly to be mentioned; and how necessary it is to maintain one's Character and Rank in Life, and to render us agreeable to others as well as to ourselves, is as evident.—There are certain Motions, Airs, and Gestures, which become the human Countenance and Form, in which we perceive a *Civility, Openness, Simplicity, Cleanliness*; and there are others, which, to our Sense of Decorum, appear *unbecomish, affected, dissipated, and unbecomingly* quite unbecomingly to the native Dignity of our Face and Form. The first are in themselves the most easy, natural, and commendable, give one Boldness and Presence of Mind, a modest Assurance, an Address both awful and alluring, they bespeak Candour and Greatness of Mind, raise the most agreeable Prejudices in one's Favour, render Society engaging, earn our Respect, and often Love, and give Weight and authority both in Conversation and Business; in fine, they are the Clothing of Virtue, which show it to the greatest Advantage in whomsoever it is; and not only imitate, but in some measure supply it where it is wanting. Whereas the last, *i.e.* *Unbecomish, affected, dissipated, and the like*, have all the contrary Effects; they are burthenfome to one's self, a Dishonour to our Nature, and a Nuisance in Society. The former Qualities or Goods are best attained by a liberal Education, by preserving a just Sense of the Dignity

Unbecomish

of our Nature, by keeping the best and politest Company, but above all, by acquiring those virtuous and ennobling Habits of Mind, which are Decency in Perfection, which will give an Air of unaffected Grandeur, and spread
a Lustre

a Lustre truly engaging over the whole Form and Deportment.

We are next to consider those Goods which consist in exterior social Connections, as *Fame, Fortune, Civil Authority, Power.*

Goods of exterior social Connections.
Fame.

The first has a twofold Aspect, as a Good pleasant in itself, or gratifying to an original Passion, and then as expedient or useful towards a farther End. Honour from the Wife and Good, on the Account of a virtuous Conduct, is regaling to a good Man; for then his Heart re-echoes to the grateful Sound. There are few quite indifferent, even to the Commendation of the Vulgar. Though we cannot approve that Conduct which proceeds entirely from this Principle, and not from good Affection or Love of the Conduct itself, yet as it is often a Guard and additional Motive to Virtue in Creatures imperfect as we are, and often distracted by interfering Passions, it might be dangerous to suppress it altogether, however wise it may be to restrain it within due Bounds, and however laudable to use it only as a Scaffolding to our Virtue, which may be taken down when that glorious Structure is finished, but hardly till then. To pursue Fame for itself, is *innocent*; to regard it only as an Auxiliary to Virtue, is noble; to seek it chiefly as an Engine of public Usefulness, is still more noble, and highly praise-worthy. For though the Opinion and Breath of Men are transient and fading Things, often obtained without Merit, and lost without Cause; yet as our Business is with Men, and as our Capacity of serving them is generally increased in proportion to their Esteem of us, therefore sound and well-established *moral* Applause may, and will be modestly, not ostentatiously sought after by the Good; not indeed as a solitary refined Sort of Luxury, but as a public and proper Instrument to serve and bless Mankind. At the same time they will learn to despise that Reputation which is founded on Rank, Fortune, and any other Circumstances or Accomplishments that are foreign to real Merit, or to useful Services done to others, and think that Praise of little Avail which is purchased without Desert, and bestowed without Judgment.

Fortune, Power, and Civil Authority, or whatever is called Influence and Weight among Mankind, are Goods of the *second* Division, that is, valuable and pursuable only as they are *useful*, or as Means to a farther End, *viz.* procuring or preserving the immediate Objects of Enjoyment or Happiness.

Fortune, Power, &c.

pines to ourselves or others. Therefore to love such Goods on their own Account, and to pursue them as *Ends*, not the Means of Enjoyment, must be highly preposterous and absurd. There can be no Measure, no Limit to such Pursuit; all must be Whim, Caprice, Extravagance. Accordingly such Appetites, unlike all the *natural* ones, are increased by Possession, and whetted by Enjoyment. They are always precarious, and never without Fears, because the Objects lie without one's self; they are seldom without Sorrow and Vexation, because no Accession of Wealth or Power can satisfy them. But if those Goods are considered only as the

*Here for
purpose.*

Materials or Means of private or public Happiness, then the same Obligations which bind us to pursue the latter, bind us likewise to pursue the former. We may, and no doubt we ought, to seek such a Measure of Wealth as is necessary to supply all our real Wants, to raise us above servile Dependence, and provide us with such Conveniencies as are suited to our Rank and Condition in Life. To be regardless of this Measure of Wealth, is to expose ourselves to all the Temptations of Poverty and Corruption, to forfeit our natural Independency and Freedom, to degrade, and consequently to render the Rank we hold, and the Character we sustain in Society, useless, if not contemptible. When these important Ends are secured, we ought not to murmur or repine that we possess no more; yet we are not secluded by any Obligation, moral or divine, from seeking more, in order to give us that happiest and most god-like of all Powers, the *Power of doing Good*. A supine Indolence in this respect is both absurd and criminal; *absurd*, as it robs us of an inexhausted Fund of the most refined and durable Enjoyments; and *criminal*, as it renders us so far useless to the Society to which we belong. "That Pursuit of Wealth which goes

Avarice. "beyond the former End, *viz.* the obtaining the Necessaries, or such Conveniencies of Life,

"as in the Estimation of Reason, not of Vanity or Passion, are suited to our Rank and Condition, and yet is not directed to the latter, *viz.* the doing Good, is what we call AVARICE." And "that Pursuit of

Ambition. "Power, which, after securing one's self, *i. e.* attained the proper Independence and Liberty of a rational social Creature, is not

"directed to the Good of others, is what we call *Ambition*, or the *Lust of Power*." To what Extent the strict Measures of Virtue will allow us to pursue either

Wealth,

Wealth, or Power, and Civil Authority, is not perhaps possible precisely to determine. That must be left to Prudence, and the peculiar Character, Condition, and other Circumstances of each Man. Only thus far a Limit may be set, that the Pursuit of either must encroach upon no other Duty or Obligation which we owe to ourselves, to Society, or to its Parent and Head. The same Reasoning is to be applied to *Power* as to *Wealth*. It is only valuable as an Instrument of our own Security, and of the free Enjoyment of those original Goods it may, and often does, administer to us, and as an Engine of more extensive Happiness to our Friends, our Country, and Mankind. In this Degree it may, and unless a greater Good forbids it, ought to be sought after; and when it is either offered to us, or may be obtained, consistently with a good Conscience, it would be criminal to decline it, and a selfish Indolence to neglect the necessary Means of acquiring it.

Now the best, and indeed the only Way to obtain a solid and lasting *Fame*, is an uniform inflexible Course of Virtue, the employing one's Ability and Wealth in supplying the Wants, and using one's Power in promoting or securing the Happiness, the Rights and Liberties of Mankind, joined to an universal Affability and Politeness of Manners. And surely one will not mistake the Matter much, who thinks the same Course conducive to the acquiring greater Accessions both of Wealth and Power; especially if he adds to those Qualifications a vigorous Industry, a constant Attention to the Characters and Wants of Men, to the Conjectures of Times, and continually varying Genius of Affairs, and a steady intrepid Honesty, that will neither yield to the Allurements, nor be overawed with the Terrors of that corrupt and corrupting Scene in which we live. We have sometimes heard indeed of other Ways and Means, as, as Fraud, Dissimulation, Servility, and Prostitution, and the like ignoble Arts, by which the Men of the World (as they are called, shrewd Politicians, and Men of Address!) amass Wealth, and procure Power: but as we want rather to form a Man of Virtue, an honest, contented, happy Man, we leave to the Men of the World their own Ways, and permit them unenvied, and unimitated by us, to reap the Fruit of their Doings.

*How Fame
and Power
are attain-
ed.*

The next Species of Objects in the Scale of Good, are the Goods of the *Intellect*, as *Knowledge, Memory, Judgment, Taste, Sagacity, Decisiveness*, and whatever else we call *intellectual* Virtues. Let us consider

*Goods of the
Intellect.*

298 *Moral PHILOSOPHY.*

consider them a little, and the *Means* as well as *Obligations* to improve them.

As *Man* is a *rational* Creature, capable of knowing the Differences of Things and Actions—as he not only sees and feels what is present, but remembers what is past, and often foresees what is future;—as he advances, from small Beginnings, by slow Degrees, and with much Labour and Difficulty, to Knowledge and Experience:—as his Opinions sway his Passions,—as his Passions influence his Conduct,—and as his Conduct draws Consequences after it, which extend not only to the present, but to the future Time, and therefore is the principal Source of his Happiness or Misery, it is evident, that he is formed for intellectual Improvements, and that it must be of the utmost Consequence for him to improve and cultivate his intellectual Powers, on which those Opinions, those Passions, and that Conduct depend.*

But besides the future Consequences and Moment of improving our *intellectual Powers*, their immediate Exercise on their proper Objects yields the most rational and refined Pleasures. Knowledge and a right Taste in the Arts of *Imitation* and *Design*, as *Poetry*, *Painting*, *Sculpture*, *Musick*, *Architecture*, afford not only an innocent, but a most sensible and sublime Entertainment. By these the Understanding is instructed in ancient and modern Life, the History of Men and Things, the Energies and Effects of the Passions, the Consequences of Virtue and Vice; by these the Imagination is at once entertained and nourished with the Beauties of Nature and Art, lighted up and spread out with the Novelty, Grandeur, and Harmony of the Universe: and in fine, the Passions are agreeably roused, and suitably engaged by the greatest and most interesting Objects that can fill the human Mind. He who has a Taste formed to these ingenious Delights, and Plenty of Materials to gratify it, can never want the most agreeable Exercise and Entertainment, nor once have reason to make that fashionable Complaint of the Tedioufness of Time. Nor can he want a proper Subject for the Discipline and Improvement of his Heart. For being daily conversant with *Beauty*, *Order*, and *Design*, in inferior Subjects, he bids fair for growing in due Time an Admirer of what is fair and well-proportioned in the Conduct of Life, and the Order of Society, which is only *Order* and *Design* exerted

* *Ful. Philoj. Sicic. Confac. Lib. 1. §. 3, 4, &c.*

Moral PHILOSOPHY. 299

in their highest Subject. He will learn to transfer the
 ers of Poetry to the Harmony of the Mind, and of
 overned Passions; and from admiring the Virtues of
 in moral Paintings, come to approve and imitate them.
 Therefore to cultivate a *true* and *correct Taste*,
 e both our *Interest* and our *Duty*, when the Circum-
 of our Station give Leisure and Opportunity for it, and
 he doing it is not inconsistent with our higher Obliga-
 or Engagements to Society and Mankind.

best attained by reading the best Books,
good Sense has more the Ascendant than *How attain-*
 ing, and which retain more to *Practice* than *ed.*
ulation; by studying the best Models, *i. e.*
 which profess to imitate Nature most, and approach the
 to it, and by conversing with Men of the most refined
 and the greatest Experience in Life.

to the other *intellectual* Goods, what a
 of Entertainment must it be to invasti- *Moment of*
 e Truth and various Relations of Things, *intellectual*
 e the Operations of Nature to general *Goods.*
 to explain by these its manifold Phæ-
 a, to understand that Order by which the Universe
 old, and that Oeconomy by which it is governed; to
 ainted with the human Mind, the Connections, Sub-
 ions, and Uses of its Powers, and to mark their Energy

! How agreeable to the ingenious Enquirer, to ob-
 he manifold Relations and Combinations of indivi-
 inds in Society, to discern the Causes why they flou-
 decay, and from thence to ascend, through the vast
 of Beings, to that *general* Mind which presides over all,
 erates unseen in every System, and in every Age,
 r the whole Compass and Progression of Nature! De-
 o such Entertainments as these, the *Contemplative* have
 ned every other Pleasure, retired from the Body, so
 lk, and sequester'd themselves from social Intercourse;
 e the *Busy* have often preferred to the Hurry and Din-
 e, the calm Retreats of Contemplation; for these,
 once they came to taste them, even the *Gay* and *Vo-*
 s have thrown up the lawless Pursuits of Sense and
 te, and acknowledged these mental Enjoyments to be
 st *refined*, and indeed the *only* Luxury. Besides, by a
 nd large Knowledge of Nature, we recognize the
 ions of its Author; and thus Piety, and all those pious
 ons which depend on just Sentiments of his Character,
 akened and confirmed; and a thousand superstitious
 Fears,

fears, that arise from partial Views of his Nature and Works, will of course be excluded. An extensive Prospect of human Life, and of the Periods and Revolutions of human Things, will conduce much to the giving a certain Greatness of Mind, and a noble Contempt of those little Competitions about Power, Honour, and Wealth, which *disturb* and *divide* the Bulk of Mankind; and promote a calm Indurance of those Inconveniencies and Ills that are the common Appendages of Humanity. Add to all, that a just Knowledge of human Nature, and of those Hinges upon which the Business and Fortunes of Men turn, will prevent our thinking either too highly, or too meanly of our Fellow-Creatures, give no small Scope to the Exercise of Friendship, Confidence and Good-will, and, at the same time, brace the Mind with a proper Caution and Distrust, those Nerves of Prudence, and give a greater Mastery in the Conduct of private as well as public Life. Therefore, by cultivating our Intellectual Abilities, we shall best promote and secure our Interest, and be qualified for acting our Part in Society with more Honour to ourselves, as well as Advantage to Mankind. Consequently to improve them to the utmost of our Power is our Duty; they are Talents committed to us by the Almighty Head of Society, and we are accountable to him for the Use of them. But be it remembered withal, that how engaging soever the *Muses* and *Graces* are, they are chiefly valuable, as they are Handmaids to usher in and set off the *Moral Virtues*, from whose Service if they are ever divorced, they become Retainers to the meaner Passions, Panders to Vice, and convert Men (if we may use the Expression) into a refined Sort of Savages.

The Intellectual Virtues are best improved
Hewitts. by accurate and impartial Observation, extensive Reading, and unconfined Converse with Men of all Characters, especially with Those who, to private Study, have joined the widest Acquaintance with the World and greatest Practice in Affairs; but above all, by being much in the World, and having large Dealings with Mankind. Such Opportunities contribute much to divert one of Prejudices and a servile Attachment to crude Systems, to open one's Views, and to give that Experience on which the most useful, because the most practical Knowledge is built, and from which the surest Maxims for the Conduct of Life are deduced.

The highest Goods which enter into the
Moral Goods. Composition of Human Happiness are *Moral Goods* of the Mind, directly and ultimately regarding

garding ourselves ; as *Command of the Appetites and Passions, Prudence and Caution, Magnanimity, Fortitude, Humility, Love of Virtue, Love of God, Resignation*, and the like. These sublime Goods are Goods by way of Eminence, Goods recommended and enforced by the most intimate and awful Sense and Consciousness of our Nature ; Goods that constitute the Quintessence, the very Temper of Happiness, that Form and Complexion of Soul which renders us approveable and lovely in the Sight of God ; Goods, in fine, which are the Elements of all our future Perfection and Felicity.

Most of the other Goods we have considered depend partly on ourselves, and partly on Accidents which we can neither foresee nor prevent, and result from Causes which we cannot influence or alter. They are such Goods as we may possess to-day and lose to-morrow, and which require a Felicity of Constitution, and Talents to attain them in full Vigour and Perfection, and a Felicity of Conjunctures to secure the Possession of them. Therefore did our Happiness depend altogether or chiefly on such transitory and precarious Possessions, it were itself most precarious, and the highest Folly to be anxious about it.—But though Creatures, constituted as we are, cannot be indifferent about such Goods, and must suffer in some degree, and consequently have our Happiness incomplete without them, yet they weigh but little in the Scale, when compared with Moral Goods. By the benevolent Constitution of our Nature these are placed within the Sphere of our Activity, so that no Man can be destitute of them unless he is first wanting to himself. Some of the wisest and best of Mankind have wanted most of the former Goods, and all the external kind, and felt most of the opposite Ills, such at least as arise from without ; yet by possessing the latter, *viz.* the Moral Goods, have declared they were happy, and to the Conviction of the most impartial Observers have appeared happy. The worst of Men have been surrounded with every outward Good and Advantage of Fortune, and have possessed great Parts ; yet for want of Moral Rectitude, have been, and have confessed themselves, notoriously and exquisitely miserable. The Exercise of Virtue has supported its Votaries, and made them exult in the midst of Tortures almost intolerable ; nay, how often has some false Form or Shadow of it sustained even the greatest Villains *
and

* As Ravillac, who assassinated Henry the Fourth of France ; and Balthazar Gerardi, who murdered William the First Prince of Orange.

and Bigots under the same Pressures ! But no external Goods, no Goods of Fortune have been able to alleviate the Agonies, or expel the Fears of a guilty Mind, conscious of the deserved Hatred and Reproach of Mankind, and the just Displeasure of Almighty God. The other Senses and Capacities of Enjoyment are gratified when they obtain their respective Objects, and the Happiness of the correspondent Passions depends on their Success in their several Pursuits. Thus the Love of Honour, of Pleasure, of Power, and the like, are satisfied only when they obtain the desired Honour, Pleasure, or Power: when they fail of attaining these, they are disappointed, and Disappointment gives Disgust. But *Moral Good* is of so singular and sublime a Nature, that when the Mind is in pursuit of it, though it should prove unsuccessful in its Aims, it can rest in the Conduct without repining, without being dejected at the ill Success; nay, the Pleasure attending the Consciousness of upright Aims and generous Efforts absorbs the Disappointment, and makes inferior Ends disappear as of no amount in the great Aggregate or Surplusage of Good that remains. So that though Human Happiness, in the present State, consists of many separate and little Rivulets, which must often be left dry in the perpetual Flux and Reflux of Human Things, yet the main Stream, with which those lesser ones do generally communicate, flows from within, from the Heart of Man, and, if this be sound and clear, rolls on through Life with a strong and equal Current. Yet as many small Articles make up a pretty large Sum, and as these inferior Goods which enter into the account, as *Health, Fame, Fortune*, and the like, are often, even after our utmost Care, unattainable, or at least precarious, it is evidently of the utmost Consequence to be prepared against the Want or Loss of them, by having our Desires moderate, and our Passions under due Command. And let it be remembered, that it is not only of great Importance to our Ease and Security against Ill, but one of the highest Improvements of Virtue, to condemn those Things, the Contempt of which is truly great and heroic, and to place our Happiness chiefly in those virtuous Exercises and Affections which arise from a pure and well-disposed Mind; an Happiness which no Condition of Life can exclude, no Change of Fortune interrupt or destroy. This will arm and fortify the Mind against the Want of those inferior Goods, and against the Pains which result to the Generality of Mankind from the contrary Evils.

As

As the present Condition of Human Life is wonderfully chequered with Good and Ill, and as no Height of Station, no Affluence of Fortune can absolutely insure the Good or secure against the Ill, it is evident that a great Part of the Comfort and Serenity of Life must lie in having our Minds duly affected with regard to both, *i. e.* rightly attuned to the Loss of one and the Sufferance of the other. For it is certain that outward Calamities derive their chief Malignity and Pressure from the inward Dispositions with which we receive them. By managing these right, we may greatly abate that Malignity and Pressure, and consequently diminish the Number, and weaken the Moment of the Ills of Life, if we should not have it in our Power to obtain a large Share of its Goods. There are particularly three Virtues which go to the forming this right Temper towards Ill, and which are of singular Efficacy, if not totally to remove, yet wonderfully to alleviate the Calamities of Life. These are *Fortitude*, or *Patience*, *Humility*, and *Resignation*. Let us consider them a little, and the Effects they produce.

The mixed Condition of Human Life requires particular Virtues.

Fortitude is that calm and steady Habit of Mind, which either moderates our Fears, and enables us bravely to encounter the Prospect of Ill, or renders the Mind serene and invincible under its immediate Pressure. It lies equally distant from Rashness and Cowardice; and though it does not hinder us from feeling, yet prevents our complaining or shrinking under the Stroke. It always includes a generous Contempt of, or at least a noble Superiority to, those precarious Goods of which we can insure neither the Possession nor Continuance. The Man therefore who possesses this Virtue in this ample Sense of it, stands upon an Eminence, and sees human Things below him; the Tempest indeed may reach him, but he stands secure and collected against it upon the Basis of conscious Virtue, which the severest Storms can seldom shake, and never overthrow.

Humility is another Virtue of high Rank and Dignity, though often mistaken by proud Mortals for Meanness and Pusillanimity. It is opposed to *Pride*, which commonly includes in it a false or over-rated Estimation of our own Merit, an Ascription of it to ourselves as its only and original Cause, an undue Comparison of ourselves with others, and, in consequence of that supposed Superiority, an arrogant Preference of ourselves, and a supercilious Contempt of them. *Humility*, on the other hand, seems to denote that modest and ingenuous Temper of Mind,

Mind, which arises from a just and equal Estimate of our own Advantages compared with those of others, and from a Sense of our deriving all originally from the Author of our Being. Its ordinary Attendants are Mildness, a gentle Forbearance, and an easy unassuming Humanity with regard to the Imperfections and Faults of others; Virtues rare indeed, but of the fairest Complexion, the proper Offspring of so lovely a Parent, the best Ornaments of such imperfect Creatures as we are, precious in the Sight of God, and which sweetly allure the Hearts of Men.—This Virtue was not altogether unknown to the more sober Moralists among the Ancients, who place *Submissio Animi* among the Train of Virtues; but it is taught in its highest Perfection, and enforced by the greatest Example and the strongest Motives in the *Christian* Religion, which recommends and exalts this as well as every other Moral and Divine Virtue, beyond every other System of Religion and Philosophy that ever appeared in the World; and teaches us throughout the whole of it to refer every Virtue and every Endowment to their original Source, the Father of Lights, *from whom descends every good and perfect Gift*. Humility is a Virtue which highly adorns the Character in which it resides, and sets off every other Virtue; it is an admirable Ingredient of a contented Mind, and an excellent Security against many of those Ills in Life which are most sensibly felt by People of a delicate Nature. To be persuaded of this, we need only remember how many of our Uneasinesses arise from the Mortifications of our Pride——how almost every Ill we suffer, and all the Opposition we meet with, is aggravated and sharpened by the Reflection on our imaginary Merit, or how little we deserved those Ills, and how much we were entitled to the opposite Goods. Whereas, a sober Sense of what we are and whose we are, and a Consciousness how far short our Virtue is of that Standard of Perfection to which we ought to aspire, will blunt the Edge of Injuries and Affronts, and make us sit down contented with our Share of the Goods, and easy under the Ills of Life, which this quick-sighted, unassuming Virtue will teach us often to trace to our own Misconduct, and consequently to interpret as the just and wholesome Correction of Heaven.

Resignation is that mild and heroic Temper of Mind, which arises from a Sense of an infinitely wise and good Providence, and enables one to acquiesce, with a cordial Affection, in its just Appointments. This Virtue has something very peculiar in its Nature, and sublime in its Efficacy. For it teaches us to bear

Not only with Patience and as being unavoidable, but it transforms, as it were, Ill into Good, by leading us to consider it and every Event that has the least Appearance of Ill; as a Divine Dispensation, a wise and benevolent Temperament of Things, subservient to Universal Good, and, of course, including that of every Individual, especially of such as calmly stoop to it. In this Light, the Administration itself, nay every Act of it, becomes an Object of Affection, the Evil disappears, or is converted into a Balm which both heals and nourisheth the Mind. For, though the first unexpected Access of Ill may surprize the Soul into Grief, yet that Grief, when the Mind calmly reviews its Object, changes into Contentment, and is by degrees exalted into Veneration and divine Compofure. Our private Will is lost in that of the Almighty, and our Security against every real Ill rests on the same bottom as the Throne of him who lives and reigns for ever. He, therefore, who is provided with such Armour, taken, if we may say so, from the Armory of Heaven, may be proof against the sharpest Arrows of Fortune, and defy the impotence of human Malice; and though he cannot be secure against those Ills which are the ordinary Appendages of Man's lot, yet may possess that quiet contented Mind which takes off their Pungency, and is next to an Exemption from them. But we can only touch on these Things; a fuller Detail of our Obligations to cultivate and pursue these Moral Goods of the Mind, and the best Method of doing it, must be reserved to another and more proper Place.

Before we finish this Section, it may be fit to observe, that as the Deity is the supreme and inexhausted Source of Good, on whom the Happiness of the whole Creation depends; as *Chief Good* *Object* *and Formal.* he is the highest Object in Nature, and the only Object who is fully proportioned to the *Intellectual* and *Moral* Powers of the Mind, in whom they ultimately rest and find their most perfect Exercise and Completion, he is therefore termed the CHIEF GOOD of Man, OBJECTIVELY considered. And *Virtue*, or the proportioned and vigorous Exercise of the several Powers and Affections on their respective Objects, as above described, is, in the Schools, termed the CHIEF GOOD, FORMALLY considered, or its FORMAL *Idea*, being the inward Temper and native Constitution of human Happiness.

From the Detail we have gone through, the following Propositions may be deduced.

306 *Moral PHILOSOPHY.*

First, It is evident that the Happiness of such
Corollaries. a *Progressive* Creature as Man can never be at
 a stand, or continue a fixed invariable Thing.
 His finite Nature, let it rise ever so high, admits still higher
 Degrees of Improvement and Perfection. And his Progression
 in Improvement, or Virtue, always makes way for a
 Progression in Happiness. So that no possible Point can be
 assigned in any Period of his Existence in which he is perfectly
 happy, that is, so happy as to exclude higher Degrees
 of Happiness. All his Perfection is only Comparative. 2. It
 appears that many things must conspire to complete the
 Happiness of so *various* a Creature as Man, subject to so many
 Wants, and susceptible of such different Pleasures. 3. As his
 Capacities of Pleasure cannot be all gratified at the same time,
 and must often interfere with each other in such a precarious
 and fleeting State as Human Life, or be frequently disappointed,
 perfect Happiness, *i. e.* the undisturbed Enjoyment of the several
 Pleasures of which we are capable, is unattainable in our
 present State. 4. That State is most to be sought after, in
 which the fewest Competitions and Disappointments can happen,
 which least of all impairs any Sense of Pleasure, and
 opens an inexhausted Source of the most refined and lasting
 Enjoyments. 5. That State which is attended with all those
 Advantages, is a State or Course of Virtue. 6. THEREFORE,
 a State of *Virtue*, in which the Moral Goods of the Mind are
 attained, is the HAPPIEST STATE.

S E C T. III. *Duties to SOCIETY.*

C H A P. I.

Filial and Fraternal Duty.

AS we have followed the Order of Nature in tracing the
 History of Man, and those Duties which he owes to
 himself, it seems reasonable to take the same Method with
 those he owes to SOCIETY, which constitute the *second Class*
 of his *Obligations*.

*Connection
 of Parents.* His Parents are among the earliest Objects
 of his Attention, he becomes soonest acquainted
 with them, reposes a peculiar Confidence
 in them, and seems to regard them with a
 fond

Moral PHILOSOPHY. 307

fond Affection, the early Prognostics of his future *Piety* and *Gratitude*. Thus does Nature dictate the first Lines of filial Duty, even before a just Sense of the Connection is formed. But when the Child is grown up, and has attained to such a Degree of Understanding, as to comprehend the *Moral Tie*, and be sensible of the Obligations he is under to his Parents; when he looks back on their tender and disinterested Affection, their incessant Cares and Labours in nursing, educating and providing for him during that State in which he had neither Prudence nor Strength to care and provide for himself, he must be conscious that he owes to them these peculiar Duties.

To reverence and honour them as the Instruments of Nature in introducing him to Life, and to that State of Comfort and Happiness which he enjoys; and therefore to esteem and imitate their good Qualities, to alleviate and bear with, and spread, as much as possible, a decent Veil over their Faults and Weaknesses.

*Duties to
Parents.*

2. To be highly grateful to them for those Favours which it can hardly ever be in his Power fully to repay; to shew this Gratitude by a strict Attention to their Wants, and a solicitous Care to supply them; by a submissive Deference to their Authority and Advice, especially by paying great Regard to it in the Choice of a Wife, and of an Occupation; by yielding to, rather than peevishly contending with their Humours, as remembering how oft they have been persecuted by his; and in fine, by soothing their Cares, lightening their Sorrows, supporting the Infirmities of Age, and making the remainder of their Life as comfortable and joyful as possible.

—— To pay these Honours and make these Returns is, according to *Plato*, to pay the oldest, best, and greatest of Debts, next to those we owe to our supreme and common Parent. They are founded in our Nature, and agreeable to the most fundamental Laws of *Gratitude*, *Honour*, *Justice*, *Natural Affection* and *Piety*, which are interwoven with our very Constitution; nor can we be deficient in them without casting off that Nature, and contradicting those Laws.

As his Brethren and Sisters are the next with whom the Creature forms a *Social* and *Moral* Connection, to them he owes a *Fraternal* Regard; and with them ought he to enter into a strict League of Friendship, mutual Sympathy, Advice, Assistance, and a generous Intercourse of kind Offices, remembering their Relation to common Parents, and that Bro-

*Duties to
Brethren
and Sisters.*

therhood of Nature, which unites them into a closer Community of Interest and Affection.

C H A P. II.

Concerning Marriage.

*Connection
with the
other Sex.*

WHEN Man arrives to a certain Age, he becomes sensible of a peculiar Sympathy and Tenderness towards the other Sex; the Charms of Beauty engage his Attention, and call forth new and softer Dispositions than he has yet felt. The many amiable Qualities exhibited by a fair Outside, or by the mild Allurement of Female Manners, or which the prejudiced Spectator without much Reasoning supposes those to include, with several other Circumstances, both natural and accidental, point his View and Affection to a particular Object, and of course contract that general rambling Regard, which was lost and useless among the undistinguished Croud, into a peculiar and permanent Attachment to one Woman, which ordinarily terminates in the most important, venerable, and delightful Connection in Life.

*The Grounds
of this Con-
nection.*

The State of the Brute Creation is very different from that of Human Creatures. The former are cloathed and generally armed by their Structure, easily find what is necessary to their Subsistence, and soon attain their Vigour and Maturity; so that they need the Care and Aid of their Parents but for a short while; and therefore we see that Nature has assigned to them vagrant and transient Amours. The Connection being purely *Natural* and merely for propagating and rearing their Offspring, no sooner is that End answered, than the Connection dissolves of course. But the Human Race are of a more tender and defenceless Constitution; their Infancy and Non-age continue longer; they advance slowly to Strength of Body, and Maturity of Reason; they need constant Attention, and a long Series of Cares and Labours to train them up to Decency, Virtue, and the various Arts of Life. Nature has, therefore, provided them with the most affectionate and anxious Tutors, to
aid

aid their Weakness, to supply their Wants, and to accomplish them in those necessary Arts, even their own Parents, on whom she has devolved this mighty Charge, rendered agreeable by the most alluring and powerful of all Ties, Parental Affection. But unless both concur in this grateful Task, and continue their joint Labours, till they have rear'd up and planted out their young Colony, it must become a Prey to every rude Invader, and the Purpose of Nature in the original Union of the Human Pair be defeated. Therefore our Structure as well as Condition is an evident Indication, that the Human Sexes are destined for a more intimate, for a moral and lasting Union. It appears likewise, that the principal End of Marriage is not to propagate and nurse up an Offspring, but to educate and form Minds for the great Duties and extensive Destinations of Life. Society must be supplied from this original Nursery with useful Members, and its fairest Ornaments and Supports. But how shall the young Plants be guarded against the Inclemencies of the Air and Seasons, cultivated and raised to Maturity, if Men, like Brutes, indulge to vagrant and promiscuous Amours?

The Mind is apt to be dissipated in its Views, and Acts of Friendship and Humanity; unless *Moral Ends* the former be directed to a particular Object, and *of Marriage.* the latter employed in a particular Province.

When Men once indulge to this Dissipation, there is no stopping their Career, they grow insensible to Moral Attractions, and by obstructing, or impairing, the decent and regular Exercise of the tender and generous Feelings of the human Heart, they in time become unqualified for, or averse to, the forming a Moral Union of Souls, which is the Cement of Society, and the Source of the purest domestic Joys. Whereas a rational, undepraved *Love*, and its fair Companion, *Marriage*, collect a Man's Views, guide his Heart to its proper Object, and by confining his Affection to that Object, do really enlarge its Influence and Use. Besides, it is but too evident from the Conduct of Mankind, that the common Ties of Humanity are too feeble to engage and interest the Passions of the Generality in the Affairs of Society. The Connections of Neighbourhood, Acquaintance, and general Intercourse, are too wide a Field of Action for many; and those of a *Public* or *Community* are so far more, and in which they *either care not, or know not how* to exert themselves. Therefore Nature, ever wise and benevolent, by implanting that strong Sympathy which reigns between the Individuals of each Sex, and by urging them to form

310 *Moral PHILOSOPHY.*

a particular moral Connection, the Spring of many domestic Endearments, has measured out to each Pair a particular *Sphere of Action*, proportioned to their Views, and adapted to their respective Capacities. Besides, by interesting them deeply in the Concerns of their own little Circle, she has connected them more closely with Society, which is composed of particular Families, and bound them down to their good Behaviour in that particular Community to which they belong. This *Moral Connection* is *Marriage*, and this *Sphere of Action* is a *Family*. It appears from what has been said that, to adult Persons, who have Fortune sufficient to provide for a Family, according to their Rank and Condition in Life, and who are endued with the ordinary Degrees of Prudence necessary to manage a Family, and educate Children, it is a Duty they owe to Society, to marry.

Some Pretenders to a peculiar Refinement in *Morals* think, however, that a *single State* is more conducive to the Perfection of our Nature, and to those sublime Improvements to which Religion calls us. Sometimes indeed the more important Duties, we owe to the Public, which could scarce be performed, or not so well in the married State, may require the Single Life, or render the other not so honourable a Station in such Circumstances; but surely, it must be improving to the *Social Affections* to direct them to particular Objects whom we esteem, and to whom we stand in the nearest Relation, and to ascertain their Exercise in a Field of Action, which is both agreeable in itself, and highly advantageous to Society. The constant Exercise of Natural Affection, in which one is necessarily engaged in providing for, and training up one's Children, opens the Heart, and must inure the Mind to frequent Acts of Self-denial and Self-command, and consequently strengthen the Habits of Goodness. The Truth of this is but too evident in those married Persons who are so unfortunate as to have no Children, who for want of those necessary Exercises of Humanity are too generally over-anxious about the World, and perhaps too attentive to the Affair of Oeconomy. Another Circumstance deserves to be remembered, that Men who are continually engaged in *Study* or *Business*, or anxiously intent on public Concerns, are apt to grow stern and severe, or peevish and morose, on account of the frequent Rubs they meet with, or the Fatigues they undergo in such a Course. The Female Softness is therefore useful to moderate their Severity, and change their Ill-humour into domestic Tenderness, and a softer kind of Humanity.

Humanity. And thus their Minds, which were over-strained by the Intensity of their Application, are at once relaxed and returned for public Action. The Minds of both Sexes are as much formed one for the other, by a Temperament peculiar to each, as their Persons. The *Strength, Firmness, Courage, Gravity, and Dignity* of the *Man*, tally to the *Softness, Delicacy, Tendernefs of Passion, Elegance of Taste, and Decency of Conversation* of the *Woman*. The *Male* Mind is formed to *defend, deliberate, foresee, contrive, and advise*. The *Female* One to *confide, imagine, apprehend, comply, and execute*. Therefore the proper Temperament of these different Sexes of Minds, make a fine moral Union; and the well-proportioned Opposition of different or contrary Qualities, like a due Mixture of Discords in a Composition of Music, swells the Harmony of Society more than if they were all Unisons to each other. And this Union of *moral Sexes*, if we may express it so, is evidently more conducive to the Improvement of each, than if they lived apart. For the *Man* not only protects and advises, but communicates Vigour and Resolution to the *Woman*. She in her turn softens, refines and polishes him. In her Society he finds Repose from Action and Care, in her Friendship the Ferment into which his Passions were wrought by the Hurry and Distraction of public Life, subsides and settles into a Calm; and a thousand nameless Graces and Decencies that flow from her Words and Actions, form him for a more mild and elegant Deportment. His Conversation and Example on the other hand, enlarge her Views, raise her Sentiments, sustain her Resolutions, and free her from a thousand Fears and Inquietudes, to which her more feeble Constitution subjects her. Surely such Dispositions, and the happy Consequences which result from them, cannot be supposed to carry an unfriendly Aspect to any Duty he owes either to *God*, or to *Man*.

Of the *Conjugal Alliance* the following are the *natural Laws*. First, Mutual Fidelity to the Marriage-Bed. Disloyalty defeats the very End of Marriage, dissolves the natural Cement of the Relation, weakens the moral Tye, the chief Strength of which lies in the Reciprocation of Affection, and by making the Offspring uncertain, diminishes the Care and Attachment necessary to their Education.

2. A Conspiracy of Counsels and Endeavours to promote the common Interest of the Family, and to educate their common Offspring. In order to observe these Laws, it is necessary to cultivate both before and during the married

State, the strictest Decency and Chastity of Manners, and a just Sense of what becomes their respective Characters.

3. The Union must be inviolable and for Life. The Nature of Friendship, and particularly of this Species of it, the Education of their Offspring, and the Order of Society and of Successions which would otherwise be extremely perplexed, do all seem to require it. To preserve this Union, and render the matrimonial State more harmonious and comfortable, a mutual Esteem and Tenderneſs, a mutual Deference and Forbearance, a Communication of Advice, and Assistance and Authority, are absolutely neceſſary. If either Party keep within their proper Departments there need be no Diſputes about Power of Superiority, and there will be none. They have no *opposite*, no *ſeparate* Interests, and therefore there can be no just Ground for Opposition of Conduct.

From this Detail, and the present State of *Polygamy*. Things, in which there is pretty near a Parity of Numbers of both Sexes, it is evident that *Polygamy* is an *unnatural* State; and though it should be granted to be more fruitful of Children, which however it is not found to be, yet it is by no means so fit for rearing Minds, which seems to be as much, if not more, the Intention of Nature, than the Propagation of Bodies.

In what Cases Divorce may be proper, what *Divorce, &c.* are the just Obstacles to Marriage, and within what Degrees of Consanguinity it may be allowed, we have not room to discuss here, and therefore we refer the Reader to Mr. *Hutchinson's* ingenious *Moral Compend*. Book III. Chap. 1.

C H A P. III.

Of Parental Duty.

Connection of Parents and Children. THE Connection of Parents with their Children is a natural Consequence of the matrimonial Connection, and the Duties which they owe them, result as naturally from that Connection. The feeble State of Children, subject to so many Wants and Dangers, requires their incessant Care and Attention; their ignorant and uncultivated Minds demand their continual instruction and Culture. Had human Creatures

Moral PHILOSOPHY. 313

tures come into the World with the full Strength of *Men*, and the Weakness of Reason and Vehemence of Passions which prevail in *Children*, they would have been too strong, or too stubborn to have submitted to the Government and Instruction of their Parents. But, as they were designed for a Progression in Knowledge and Virtue, it was proper that the Growth of their Bodies should keep Pace with that of their Minds, lest the Purposes of that Progression should have been defeated. Among other admirable Purposes which this gradual Expansion of their outward as well as inward Structure serves, this is one, that it affords ample Scope to the Exercise of many tender and generous Affections, which fill up the domestic Life with a beautiful Variety of Duties and Enjoyments; and are of course a noble Discipline for the Heart, and an hardy kind of Education for the more honourable and important Duties of *public* Life.

The above-mentioned weak and ignorant State of Children, seems plainly to invest their Parents with such Authority and Power as is necessary to their Support, Protection, and Education; but that Authority and Power can be construed to extend no farther than is necessary to answer those Ends, and to last no longer than that Weakness and Ignorance continue; wherefore the Foundation or Reason of the Authority and Power ceasing, they cease of course. Whatever Power or Authority then it may be necessary or lawful for Parents to exercise during the Non-age of their Children, to assume or usurp the same when they have attained the Maturity or full Exercise of their Strength and Reason, would be tyrannical and unjust. From hence it is evident, that Parents have no Right to punish the Persons of their Children more severely than the Nature of their Wardship requires, much less to invade their Lives, to encroach upon their Liberty, or transfer them as their Property to any Master whatsoever. But if any Parent should be so unjust and inhuman as to consider and treat them like his other Goods and Chattels, surely whenever they dare, they may resist, and whenever they can, shake off that inhuman and unnatural Yoke, and be free with that Liberty with which God and Nature invested them.

The first Class of Duties which Parents owe their Children respect their natural Life, and these comprehend Protection, Nurture, Provision, introducing them into the World in a manner suitable to their Rank and Fortune, and the like.

The Authority founded on that Connection.

Duties of Parents.

The

Education.

The second Order of Duties regards the *intellectual* and *moral* Life of their Children, or their Education in such Arts and Accomplishments as are necessary to qualify them for performing the Duties they owe to themselves and to others. As this was found to be the principal Design of the matrimonial Alliance, so the fulfilling that Design is the most important and dignified of all the parental Duties. In order therefore to fit the Child for acting his Part wisely and worthily, as a *Man*, as a *Citizen*, and a *Creature of God*, both Parents ought to combine their joint Wisdom, Authority and Power, and each apart to employ those Talents, which are the peculiar Excellency and Ornament of their respective Sex. The Father ought to *lay out* and *superintend* their Education, the Mother to execute and manage the Detail of which she is capable. The *former* should direct the manly Exertion of the intellectual and moral Powers of his Child. His Imagination, and the Manner of those Exertions are the peculiar Province of the *latter*. The *former* should advise, protect, command, and by his Experience, masculine Vigour, and that superior Authority which is commonly ascribed to his Sex, brace and strengthen his Pupil for *active* Life, for Gravity, Integrity, and Firmness in Suffering. The Business of the *latter* is to bend and soften her *Male* Pupil, by the Charms of her Conversation, and the Softness and Decency of her Manners, for *social* Life, for Politeness of Taste, and the elegant Decorums and Enjoyments of Humanity; and to improve and refine the Tenderness and Modesty of her *Female* Pupil, and form her to all those mild domestic Virtues, which are the peculiar Characteristics and Ornaments of her Sex.

*Delightful Task ! to rear the tender Thought,
To teach the fair Idea how to shoot ;
To breathe th' enliv'ning Spirit, and to fix
The generous Purpose in the glowing Breast.*

To conduct the opening Minds of their sweet Charge thro' the several Periods of their Progress, to assist them in each Period in throwing out the latent Seeds of Reason and Ingenuity, and in gaining fresh Accessions of Light and Virtue; and at length, with all these Advantages, to produce the young Adventurers upon the great Theatre of human Life, to play their several Parts in the Sight of their Friends, of Society, and Mankind ! How gloriously does Heaven reward the Task, when the Parents behold those dear Images and
Re-

Moral PHILOSOPHY. 315

Representatives of themselves, inheriting their Virtues as well as Fortunes, sustaining their respective Characters gracefully and worthily, and giving them the agreeable Prospect of transmitting their Name with growing Honour and Advantage to a Race yet unborn !

C H A P. IV.

Herile and Servile Duty.

IN the natural Course of human Affairs it must necessarily happen, that some of Mankind will live in Plenty and Opulence, and others be reduced to a State of Indigence and Poverty. The former need the Labours of the latter, and the latter the Provision and Support of the former. This mutual Necessity is the Foundation of that Connection, whether we call it *Moral* or *Civil*, which subsists between Masters and Servants. He who feeds another has a Right to some Equivalent, the Labour of him whom he maintains, and the Fruits of it. And he who labours for another, has a Right to expect that he should support him. But as the Labours of a Man of ordinary Strength are certainly of greater Value than mere Food and Cloathing; because they would actually produce more, even the Maintenance of a Family, were the Labourer to employ them in his own Behalf; therefore he has an undoubted Right to rate and dispose of his Service for certain Wages above mere Maintenance; and if he has incautiously disposed of it for the latter only, yet the Contract being of the *onerous* kind, he may equitably claim a Supply of that Deficiency. If the Service be specified, the Servant is bound to that only; if not, then he is to be construed as bound only to such Services as are consistent with the Laws of Justice and Humanity. By the voluntary Servitude to which he subjects himself, he forfeits no Rights but such as are necessarily included in that Servitude, and is obnoxious to no Punishment but such as a voluntary Failure in the Service may be supposed reasonably to require. *The Offspring of such Servants*

*The Ground
of this Con-
nection.*

*The Condi-
tions of Ser-
vice.*

vants have a Right to that Liberty which neither they, nor their Parents have forfeited.

The Case of great Offenders. As to those who because of some heinous Offence, or for some notorious Damage, for which they cannot otherwise compensate, are condemned to perpetual Service, they do not, on that Account, forfeit all the Rights of Men ; but those, the Loss of which is necessary to secure Society against the like Offences for the future, or to repair the Damage they have done.

The Case of Captives. With regard to Captives taken in War, it is barbarous and inhuman to make perpetual Slaves of them, unless some peculiar and aggravated Circumstances of Guilt have attended their Hostility. The Bulk of the Subjects of any Government engaged in War, may be fairly esteemed innocent Enemies, and therefore they have a Right to that Clemency which is consistent with the common Safety of Mankind, and the particular Security of that Society against which they are engaged. Though ordinary Captives have a Grant of their Lives, yet to pay their Liberty as an Equivalent, is much too high a Price. There are other Ways of acknowledging or returning the Favour, than by surrendering what is far dearer than Life itself. * To those who under Pretext of the Necessities of Commerce, drive the unnatural Trade of bargaining for human Flesh, and consigning their innocent but unfortunate Fellow-creatures to eternal Servitude and Misery, we may address the Words of a fine Writer ; " Let Avarice defend it as it will, there is an honest Reluctance in Humanity against buying and selling, and regarding those of our own Species as our Wealth and Possessions."

As it is the Servant's Duty to serve his Master with Fidelity and Cheerfulness, like one who knows he is accountable to the great Lord of the Universe, so the Master ought to exact nothing of his Servant beyond the natural Limits of Reason and Humanity, remembering that he is a Brother of the same Family, a Partner of the same Nature, and a Subject of the same great Lord.

* *Vid. Hutch. Mor. Inſt. Phil. lib. III. c. 3.*

C H A P. V.

Social Duties of the private Kind.

Hitherto we have considered only the *Domestic, Oeconomical* Duties, because these are first in the Progress of Nature. But as Man passes beyond the little Circle of a Family, he forms Connections with Relations, Friends, Neighbours, and others; from whence results a new Train of Duties of the more private social Kind, as *Friendship, Chastity, Courtesy, Good-Neighbourhood, Charity, Forgiveness, Hospitality.*

Man is admirably formed for particular social Attachments and Duties. There is a peculiar and strong Propensity in his Nature to be affected with the Sentiments and Dispositions of others. *Man's Aptitude for Society.* Men, like certain musical Instruments, are set to each other, so that the Vibrations or Notes excited in one, raise correspondent Notes and Vibrations in the others. The Impulses of *Pleasure* or *Pain*, *Joy* or *Sorrow*, made on one Mind, are by an instantaneous Sympathy of Nature, communicated in some degree to all; especially when Hearts are (as an humane Writer expresses it) in *Unison* of Kindness; the Joy that vibrates in one, communicates to the other also. We may add, that though Joy thus imparted swells the Harmony, yet Grief vibrated to the Heart of a Friend, and rebounding from thence in sympathetic Notes, melts as it were, and almost dies away. All the Passions, but especially those of the social Kind, are contagious; and when the Passions of one Man mingle with those of another, they increase and multiply prodigiously. There is a most moving Eloquence in the human Countenance, Air, Voice, and Gesture, wonderfully expressive of the most latent Feelings and Passions of the Soul, which darts them like a subtle Flame, into the Hearts of others, and raises correspondent Feelings there: Friendship, Love, Good-humour, Joy, spread through every Feature, and particularly shoot from the Eyes their softer and fiercer Fires with an irresistible Energy. And in like manner, the opposite Passions of Hatred, Enmity, Ill-humour, Melancholy, diffuse a sullen and saddening Air over the Face, and flashing from Eye to Eye, kindle a Train of similar Passions. By these and other

318 *Moral PHILOSOPHY.*

other admirable Pieces of Machinery, Men are formed for Society and the delightful Interchange of friendly Sentiments and Duties, to increase the Happiness of others by Participation, and their own by Rebound, and to diminish, by dividing, the common Stock of their Misery.

The first Emanations of the *Social Principle* beyond the Bounds of a Family, lead us to form a nearer Conjunction of Friendship or Good-will with those, who are any wise connected with us by *Blood*, or *Domestic Alliance*. To them our Affection does, commonly, exert itself in a greater or less Degree, according to the Nearness or Distance of the Relation. And this Proportion is admirably suited to the Extent of our Powers and the Indigence of our State; for it is only within those lesser Circles of Consanguinity or Alliance, that the Generality of Mankind are able to display their Abilities or Benevolence, and consequently to uphold their Connection with Society and Subserviency to a public Interest. Therefore it is our Duty to regard these closer Connections as the next Department to that of a Family, in which Nature has marked out for us a Sphere of Activity and Usefulness; and to cultivate the kind Affections which are the Cement of those endearing Alliances.

Frequently, the View of distinguishing Moral Qualities in some of our Acquaintance may give birth to that more noble Connection we call *FRIENDSHIP*, which is far superior to the Alliances of Consanguinity. For these are of a superficial, and often of a transitory Nature, of which, as they hold more of *Instinct* than of *Reason*, we cannot give such a rational Account. But *Friendship* derives all its Strength and Beauty, and the only Existence which is durable, from the Qualities of the Heart, or from virtuous and lovely Dispositions. Or, should these be wanting, they or some Shadow of them must be supposed present. Therefore *Friendship* may be described to be, "The Union of two Souls, by means of *Virtue*, the "common Object and Cement of their mutual Affection." Without Virtue, or the Supposition of it, Friendship is only a *Mercenary League*, an Alliance of Interest, which must dissolve of course when that Interest decays or subsists no longer. It is not so much any particular Passion, as a Composition of some of the noblest Feelings and Passions of the Mind. *Good Sense*, a *just Taste* and *Love of Virtue*, a *thorough Candor* and *Benignity of Heart*, or what we usually call a *Good Temper*, and a generous Sympathy of Sentiments and Affections, are the

Moral PHILOSOPHY. 319

Essary Ingredients of this virtuous Connection. When it is
 ted on Esteem strengthened by Habit, and mellowed by
 ne, it yields infinite Pleasure, ever new and ever growing,
 noble Support amidst the various Trials and Vicissitudes
 life, and an high Seasoning to most of our other Enjoy-
 its. To form and cultivate virtuous Friendship must be
 y improving to the Temper, as its principal *Object* is *Vir-*
 set off with all the Allurement of Countenance, Air and
 nners, shining forth in the native Graces of manly honest
 timents and Affections, and rendered *visible* as it were to
 friendly Spectator in a Conduct unaffectedly great and
 d; and as its principal Exercises are the very Energies of
 tue, or its Effects and Emanations. So that where-ever
 amiable Attachment prevails, it will exalt our Admiration
 Attachment to Virtue, and, unless impeded in its Course
 unnatural Prejudices, run out into a Friendship to the Hu-
 1 Race. For as no one can merit, and none ought to
 rp, the sacred Name of Friend, who hates Mankind, so,
 oeer truly loves *them*, possesses the most essential Quality
 a true Friend.

The Duties of Friendship are a mutual Esteem
 each other unbribed by Interest and indepen- *Its Duties.*
 t of it, a generous Confidence as far distant
 n Suspicion as from Reserve, an inviolable Harmony of
 timents and Dispositions, of Designs and Interests, a Fi-
 ty unshaken by the Changes of Fortune, a Constancy
 iterable by Distance of Time or Place, a Resignation of
 's personal Interest to those of one's Friend, and a recipro-
 unenvious, unreserved Exchange of kind Offices.—But
 idst all the Exertions of this Moral Connection, humane
 generous as it is, we must remember that it operates
 hin a narrow Sphere, and its immediate Operations respect
 y the Individual, and therefore, its particular Impulses must
 be subordinate to a more public Interest, or be always di-
 ted and controuled by the more extensive Connections of
 Nature.

When our Friendship terminates on any of
 other Sex, in whom Beauty or Agreeable- *Love and*
 s of Person and external Gracefulness of *Chastity.*
 nners conspire to exprefs and heighten the
 oral Charm of a tender honest Heart; and sweet, ingenious,
 dest Temper, lighted up by good Sense, it generally grows
 o a more soft and endearing Attachment. When this At-
 tachment is improved by a growing Acquaintance with the
 irth of its Object, is conducted by Discretion, and issue

at length, as it ought to do, in the Moral Connection formerly * mentioned, it becomes the Source of many amiable Duties, of a Communication of Passions and Interests, of the most refined Decencies, and of a thousand nameless deep-felt Joys of reciprocal Tenderness and Love, flowing from every Look, Word and Action. Here Friendship acts with double Energy, and the *Natural* conspires with the *Moral* Charms, to strengthen and secure the Love of Virtue. As the delicate Nature of Female Honour and Decorum, and the inexpressible Grace of a chaste and modest Behaviour, are the surest and indeed the only means of kindling at first, and ever after of keeping alive this tender and elegant Flame, and of accomplishing the excellent Ends designed by it; to attempt by Fraud to violate one, or, under Pretence of Passion, to sully and corrupt the other, and, by so doing, to expose the too often credulous and unguarded Object, with a wanton Cruelty, to the Hatred of her own Sex, and the Scorn of our's, and to the lowest Infamy of both, is a Conduct not only base and criminal, but inconsistent with that truly rational and refined Enjoyment, the Spirit and Quintessence of which is derived from the bashful and sacred Charms of Virtue kept untainted, and therefore ever alluring to the Lover's Heart.

Courtesy, Good-neighbourhood, Affability, and the like Duties, which are founded on our private Social Connections, are no less necessary and obligatory to Creatures united in Society, and supporting and supported by each other in a Chain of mutual Want and Dependence. They do not consist in a smooth Address, an artificial or obsequious Air, fawning Adulations, or a polite Servility of Manners, but in a just and modest Sense of our own Dignity and that of others, and of the Reverence due to Mankind, especially to those who hold the higher Links of the Social Chain; in a discreet and manly Accommodation of ourselves to the Foibles and Humours of others; in a strict Observance of the Rules of Decorum and Civility; but above all in a frank obliging Carriage, and generous Interchange of good Deeds rather than Words. Such a Conduct is of great Use and Advantage, as it is an excellent Security against Injury, and the best Claim and Recommendation to the Esteem, Civility and universal Respect of Mankind. This inferior Order of Virtues unite the particular Members of Society more closely, and form the lesser Pillars of the civil Fabric; which, in many Instances, supply the unavoidable

* See Chap. 2. of this *Sec.*

the Defects of Laws, and maintain the Harmony and Union of Social Intercourse, where the more important and Lines of Virtue are wanting.

Justice and *Propriety* are truly amiable and useful Duties of the social kind. There is a *clear*, and Distinction of Rights commonly taken *in Justice*, of by Moral Writers, viz. *Perfect* and

2d. To fulfil the former, is necessary to the Being and Good of Society; to fulfil the latter is a Duty equally sacred and obligatory, and tends to the Improvement and Prosperity of the State; but as the Violation of them is not equally prejudicial to the public Good, the fulfilling them is not subjected to the Force of Law, but left to the Candor, Humanity, and Justice of Individuals. And by this means ample Scope is given to exercise all the Generosity and display the genuine Merit and Lustre of Virtue. Thus the Wants and Misfortunes of all join our charitable Assistance and seasonable Supplies. The good Man, unconstrained by Law and uncontrollable by human Authority, will cheerfully acknowledge and generously this mournful and moving Claim; a Claim supported by the Sanction of Heaven, of whose Bounties he is indebted to be the grateful Trustee. If his own *perfect* Rights are invaded by the Injustice of others, he will not therefore neglect their *imperfect* Right to Pity and Forgiveness, unless the Demand of these should be inconsistent with the more exalted Rights of Society, or the public Good. In that Case he will have recourse to public Justice and the Laws, and even then will prosecute the Injury with no unnecessary Severity: rather with Mildness and Humanity. When the Injury is merely personal, and of such a Nature as to admit of Forgiveness, and the Forgiveness of which would be attended with no worse Consequences, especially of a public kind, the Man will generously forgive his offending Brother. And it is his Duty to do so, and not to take private Revenge or Retaliation for Evil. For though Redressment of Injury is a Duty, and is implanted, as we observed [above], for the good End; yet considering the manifold Partialities of the Human Mind, and the selfishness of every one to settle in his own Cause, and to execute the Sentence according to his own sentiment, it is but too evident that Mankind will not all be guided in their Power, and the lost Sufferer will not all be able to make full Redress. To that Evil, however, which with Justice would produce a more continued and violent and necessary Retaliation, but which is

it not impracticable. Therefore, where the Security of the Individual, or Good of the Public, does not require a proportionable Retaliation, it is agreeable to the general Law of Benevolence, and to the particular End of the Passion (which is to prevent Injury and the Misery occasioned by it) to forgive personal Injuries, * or not to return Evil for Evil. This Duty is one of the noble Refinements which *Christianity* has made upon the general Maxims and Practice of Mankind, and enforced with a peculiar Strength and Beauty, by sanctions to life alluring than awful. And indeed the Practice of it is generally its own Reward, by expelling from the Mind the most dreadful Intruders upon its Repose, those rancorous Passions which are begot and nursed by Resentment, and by disarming and even subduing every Enemy one has, except such as have nothing left of Men but the outward Form.

The most enlarged and humane Connection *Humanity* of the private Kind, seems to be the Hospitable Alliance, from which flow the amiable and disinterested Duties we owe to Strangers. If the Exercise of Passions of the most private and instinctive kind is beheld with Moral Approbation and Delight, how lovely and venerable must those appear, which result from a calm Philanthropy, are founded in the common Rights and Connections of Society, and embrace Men, not of a particular Sect, Party, or Nation, but all in general without Distinction, and without any of the little Partialities or Self-love.

CHAP. VI.

General Duties of the COMMERCIAL Kind.

THE next Order of Connections are those which arise from the Wants and Weakness of Mankind, and from the various Circumstances in which their different Situations place them. These we have call'd Commercial Connections, and the Duties which result from them Commercial Duties, as *Ydubon*, *Leviathan*, *Seneca*, &c. have call'd them, and the like.

It is observed somewhere by a Writer * of the *History of the World*, that though Nature is perfectly equal in her Work, yet she has observ'd a most judicious and excellent Distinction among men. From

* See *History of the World*, vol. 1. ch. 1. § 1. p. 1.

s lie beyond the Reach of Human Skill and Power, and operly of her own Department. She has given the finish- and. These Men may design to rival and imitate, but heither rival them, nor add to their Beauty or Perfection. are the Forms and Structure of Vegetables, Animals, any of their Productions, as the Honey-comb, the Spi- Web, and the like. There are others of her Works

She has of design left unfinished, as it were, in order rcise the Ingenuity and Power of Man. She has present- im a rich Profusion of Materials of every kind for his niency and Use; but they are rude and unpolished, or be come at without Art and Labour. These therefore st apply, in order to adapt them to his Use and to enjoy in Perfection. Thus Nature has given him an infinite y of Herbs, Grain, Fossils, Minerals, Wood, Water,

Air, and a thousand other crude Materials to supply merous Wants. But he must sow, plant, dig, refine, build, and, in short, manufacture the various Produce ture, in order to obtain even the Necessaries, and much the Conveniencies and Elegancies of Life. These then e Price of his Labour and Industry, and, without that, e will sell him nothing. But as the Wants of Mankind any, and the single Strength of Individuals small, they hardly find the Necessaries, and much less the Conveni-

of Life, without uniting their Ingenuity and Strength uiring these, and without a mutual Intercourse of good s. Some Men are better formed for some kinds of In- y and Labour, and others for other kinds; and different nd Climates are enriched with different Productions; Men by exchanging the Produce of their respective La- and supplying the Wants of one Country with the Su- ties of another, do, in effect, diminish the Labours of and increase the Abundance of all. This is the Foun-

of all Commerce, or Exchange of Commodities and , one with another; in order to facilitate which, Men contrived different Species of *Coin*, or *Money*, as a com- standard by which to estimate the comparative Values of effective Goods. But to render Commerce sure and ef- , *Justice*, *Fair-dealing*, *Sincerity*, and *Fidelity to Contracts* olutely necessary.

Justice, or *Fair-dealing*, or, in other words, addition, to treat others as we would be treated by them, is a Virtue of the first Import- and is found in every virtuous Character. It is the the most important connecting spirit which connect-

Mr. PHILIP C. HILL

Dear Mr. Hill:

I have just received your letter of the 14th inst. regarding the matter of the purchase of the land for the proposed new site of the Federal Building at Washington, D. C. I am sorry that I cannot give you a more definite answer at this time, but the matter is being considered by the Department of the Interior and the Department of the Army, and it is necessary for them to make a thorough investigation of the land before a decision can be reached. I am sure that you will understand the necessity for this, and I am sure that you will be patient while the investigation is being made. I will be glad to keep you advised of the progress of the investigation, and I will be glad to answer any questions you may have.

I am, Sir, very respectfully,
Your obedient servant,
John D. Hill

Why should he prove to be against his Interest? And do not we condemn him as a Knave, who violates them on that Account? A Promise is a voluntary Declaration, by Words or an Action equally significant, of our Resolution to do something in behalf of another, or for his Service. When it is made, the Person who makes it, is by all supposed under an obligation to perform it. And he to whom it is made, may demand the Performance as his Right. That Perception of obligation is a simple Idea, and is on the same Footing as our other Moral Perceptions, which may be described by Instances, but cannot be defined. Whether we have a Perception of such Obligation quite distinct from the Interest, whether Public or Private, that may accompany the Fulfilment of it, must be referred to the Conscience of every Individual. And, whether the mere Sense of that Obligation, apart from Concomitants, is not a sufficient Inducement, or Motive to keep one's Promise, without having recourse to any selfish Principle of our Nature, must be likewise appealed to the Conscience of every honest Man. *Fair-dealing* and *Fidelity* require, that we take no Advantage of the Ignorance, Passion, or Incapacity of others, from whatever cause that Incapacity arises;—that we be explicit and candid in making Bargains, just and faithful in fulfilling our Part of them. And if the other Party violates his Engagements, Redress is to be sought from the Laws, or from those who are intrusted with the Execution of them. In fine, the *commercial* Virtues and Duties require that we not only do not invade, but maintain the Rights of others;—that we be just and impartial in transferring, bartering, or exchanging property, whether in Goods or Service; and be inviolably faithful to our Word and our Engagements where the Matter of them is not criminal, and where they are not extorted by Force.—But on this the designed Brevity of the Work will not permit us farther to insist.

CHAP. VII.

Social Duties of the POLITICAL Kind.

WE are now arrived at the *last* and *highest* Order of Duties respecting Society, which result from the exercise of the most generous and heroic Affections, and are founded on our most enlarged Connections.

Political The *Social* Principle in Man is of such an ex-
Connections. panlive Nature, that it cannot be confined within
the Circuit of a Family, of Friends, or a Neigh-
bourhood; it spreads into wider Systems, and
draws Men into larger Confederacies, Communities and Com-
mon-wealths.—It is in these only that the higher Powers
of our Nature attain the highest Improvement and Perfection
of which they are capable. These Principles hardly find Ob-
jects in the solitary State of Nature. There the Principle of
Action rises no higher at farthest than *Natural affection* to-
wards one's Offspring. There Personal or Family-Wants
entirely engross the Creature's Attention and Labour, and
allow no Leisure, or, if they did, no Exercise for Views
and Affections of a more enlarged kind. In *Solitude* all
are employed in the same way, in providing for the *Animal*
Life. And even after their utmost Labour and Care, single
and unaided by the Industry of others, they find but a sorry
Supply of their Wants, and a feeble, precarious Security
against Dangers from wild Beasts; from inclement Skies and
Seasons; from the Mistakes, or petulant Passions of their Fel-
low-Creatures; from their Preference of themselves to their
Neighbours; and from all the little Exorbitances of Self-
love. But in *Society*, the mutual Aids which Men give and
receive, shorten the Labours of each, and the combined Strength
and Reason of Individuals give Security and Protection to the
whole Body. There is both a Variety and Subordination of
Genius among Mankind. Some are formed to lead and direct
others, to contrive Plans of Happiness for Individuals, and of
Government for Communities, to take in a Public Interest,
invent Laws and Arts, and superintend their Execution, and in
short to refine and civilize human Life. Others, who have
not such good Heads, may have as honest Hearts, a truly Public
spirit, Love of Liberty, Hatred of Corruption and Tyranny,
a generous Submission to Laws, Order, and Public Institu-
tions, and an extensive Philanthropy. And others, who have
none of those Capacities either of Heart, or Head, may be
well formed for Manual Exercises and Bodily Labour. The
former of these Principles have no Scope in Solitude, where
a Man's Thoughts and Concerns do all either center in him-
self, or extend no farther than a Family; into which little
Circle all the Duty and Virtue of the Solitary Mortal is
crowded. But Society finds proper Objects and Exercises for
every Genius, and the noblest Objects and Exercises for the
noblest Geniuses, and for the highest Principles in the Human
Constitution: particularly for that warmest and most divine
Passion

Passion which God hath kindled in our Bosoms, the Inclination of doing Good and reverencing our Nature; which may find here both Employment, and the most exquisite Satisfaction. In Society a Man has not only more Leisure, but better Opportunities, of applying his Talents with much greater Perfection and Success, especially as he is furnished with the joint Advice and Assistance of his Fellow-creatures, who are now more closely united one with the other, and sustain a common Relation to the same Moral System, or Community. This then is an Object proportioned to his most enlarged Social Affections, and in serving it he finds Scope for the Exercise and Refinement of his highest Intellectual and Moral Powers. THEREFORE Society, or a State of Civil Government, rests on these two principal Pillars, "That in it we find Security against those Evils which are unavoidable in Solitude—and obtain those Goods, some of which cannot be obtained at all, and others not so well in that State, where Men depend solely on their individual Sagacity and Industry."

From this short Detail it appears that *Man* is a SOCIAL Creature, and formed for a SOCIAL State; and that *Society*, being adapted to the higher Principles and Destinations of his Nature, must, of necessity, be his NATURAL State.

The Duties suited to that State, and resulting from those Principles and Destinations, or in other words, from our Social Passions and Social Connections, or Relation to a Public System, are *Love of our Country, Resignation and Obedience to the Laws, Public Spirit, Love of Liberty, Sacrifice of Life and all to the Public*, and the like.

Love of our Country is one of the noblest Passions that can warm and animate the human Breast. It includes all the limited and particular Affections to our Parents, Children, Friends, Neighbours, Fellow-citizens, Country-men. It ought to direct and limit their more confined and partial Actions within their proper and natural Bounds, and never let them inroach on those sacred and first Regards we owe to the great Public to which we belong. Were we solitary Creatures, detached from the rest of Mankind, and without any Capacity of comprehending a *Public Interest*, or without Affections, leading us to desire and pursue it, it would not be our Duty to mind it, nor criminal to neglect it. But, as we are PARTS of the *Public System*, and are not only capable of taking in large Views of its Interests, but by the strongest Affections connected with it, and prompted to take

a State of its Concerns, we are under the most sacred Ties to prosecute its Security and Welfare with the utmost Ardor, especially in times of public Trial. This *Love of our Country* does not happen on Attachment to any particular Soil, Climate, or Spot of Land; when, perhaps we first drew our Breath, though their Natural Ideas are often associated with the *Ideals* ones; and the external Signs or Symbols, help to adorn and bind them; but it may its application to that general System of Commerce, which is governed by the same Laws and Maxims, and whose several Parts are variously connected one with the other, and all united upon the basis of a common Interest. Perhaps indeed every Member of the Community cannot comprehend so large an Object, since it extends through three Provinces, and over a vast tract of Land; and still less can he form such an Idea, if there is no *Path*, *i. e.* if all are subject to the Caprice and unlimited Will of one Man; but the Preference the Generality show to their native Country; the Concern and Longing after it which they express, when they have been long absent from it; the Labours they undertake and Sufferings they endure to save or serve it; and the peculiar Attachment they have to their Countrymen, evidently demonstrate that the Passion is *natural*, and never fails to exert itself, when it is fairly disengaged from foreign Clogs, and is directed to its proper Object. Whenever it prevails in its genuine Virour and extent, it follows up all sordid and selfish Regards, it conquers the Love of *cash*, *Power*, *Plausibility*, and *the like*; when the amiable Partialities of *Friendship*, *Gratitude*, *private Affection*, or *Regards to a Family* come in Competition with it, it will teach us bravely to sacrifice all, in order to maintain the *rights*, and *promote or defend* the *Honour and Happiness* of our Country.

Religion and Obedience to the Laws, and
Education of the Society to which we belong, are
essentials to its *Existence*. It is necessary to its very Being and
Security, without which it must soon degenerate
into a State of Licence and Anarchy. The

Wellfare, nay, the Nature of Civil Society requires, that there should be a Subordination of Orders, or Diversity of Ranks and Conditions in it;—that certain Men, or Orders of Men be appointed to super-intend and manage such Affairs as concern the Public Safety and Happiness;—that all have their particular Provinces assigned them;—that such a Subordination be settled among them, as none of them may interfere with another;—and finally, that

that certain *Rules*, or common *Measures of Action* be agreed on, by which each is to discharge his respective Duty to govern or be governed, and all may concur in securing the Order, and promoting the Felicity of the whole Political Body. These *rules of Action* are the *Laws* of the Community, and those different *Orders* are the several Officers, or Magistrates, appointed by the Public to explain them, and super-intend or assist in their Execution. In consequence of this Settlement of Things, it is the Duty of each Individual to obey the Laws enacted, to submit to the Executors of them with all due Deference and Homage, according to their respective Ranks and Dignity, as to the Keepers of the Public Peace, and the Guardians of Public Liberty; to maintain his own Rank, and perform the Functions of his own Station with Diligence, Fidelity, and Incorruption. The Superiority of the *higher Orders*, or the Authority with which the State has invested them, entitle them, especially if they employ their Authority well, to the Obedience and Submission of the *Lower*, and to a proportionable Honour and Respect from all. The Subordination of the *Lower Ranks* claims Protection, Defence and Security from the higher. And the Laws, being superior to all, require the Obedience and Submission of all, being the last Resort, beyond which there is no Decision or Appeal. — Besides these natural and stated Subordinations in Society, there are others accidental and artificial, the *Opulent* and *Indigent*, the *Great* and the *Vulgar*, the *Ingenious* and *Prudent*, and those who are less so. The *Opulent* are to administer to the Necessities of the *Indigent*, and the *Indigent* to return the Fruits of their Labours to the *Opulent*. The *Great* ought to defend and patronize their *Dependents* and *Inferiors*, and *They*, in their turn, to return their combined Strength and Assistance to the *Great*. The *Prudent* should improve the Ingenuities of the Mind for the Benefit of the *Industrious*, and the *Industrious* lend the Dexterities of their Strength for the Advantage of the *Prudent*.

Public Spirit, Heroic Zeal, Love of Liberty, and the other *Political Duties* do, above all others, recommend those who practise them to the Admiration and Homage of Mankind; because, as they are the Offspring of the noblest Minds, so *are they* the Parents of the greatest Blessings to Society. Yet exalted as they are, it is only in equal and free Governments, where they can be exercised and have their due Effect. For there only does
Fundation of Liberty, &c.
a true

a true *Public* prevail, and there only is the *Public Good* made the Standard of the Civil Constitution. As the End of Society is the *Common Interest* and *Welfare* of the People associated, this End must of necessity be the *Supreme Law* or *Common Standard* by which the particular Rules of Action of the several Members of the Society towards each other are to be regulated. But a *common Interest* can be no other than that which is the Result of the *common Reason*, or *common Feelings* of all. Private Men, or a particular Order of Men, have Interests and Feelings peculiar to themselves, and of which they may be good Judges; but these may be separate from, and often contrary to the Interests and Feelings of the rest of the Society; and therefore they can have no Right to make, and much less to impose, Laws on their Fellow-Citizens, inconsistent with, and opposite to those Interests and those Feelings. Therefore a *Society*, a *Government*, or *real Public*, truly worthy the Name, and not a Confederacy of Banditti, a Clan of lawless Savages, or a Band of Slaves under the Whip of a Master, must be such a one as consists of Freemen, chusing or consenting to Laws themselves; or, since it often happens that they cannot assemble and act in a *Collective Body*, delegating a sufficient Number of *Representatives*, i. e. such a Number as shall most fully comprehend, and most equally represent, their *common Feelings* and *common Interests*, to digest and vote Laws for the Conduct and Controul of the whole Body, the most agreeable to those common Feelings and common Interests.

Political Duty A Society thus constituted by *common Reason*, and formed on the Plan of a *common Interest*, becomes immediately an Object of public Attention, public Veneration, public Obedience, a public, and inviolable Attachment, which ought neither to be seduced by Bribes, nor awed by Terrors; an Object, in fine, of all those extensive and important Duties which arise from so glorious a Confederacy. To watch over such a System; to contribute all he can to promote its Good by his Reason, his Ingenuity, his Strength, and every other Ability, whether Natural or Acquired; to resist, and, to the utmost of his Power, defeat every Inroad upon it, whether carried on by a secret Corruption, or open Violence; and to sacrifice his Ease, his Wealth, his Power, nay his Life itself, and what is dearer still, his Family and Friends, to defend or save it, it is the Duty, the Honour, the Interest, and the Happiness of every Citizen; it will make him respectable and beloved while he lives, be lamented and honoured if

if he falls in so glorious a Cause, and transmit his Name with immortal Renown to the latest Posterity.

As the PEOPLE are the Fountain of Power and Authority, the original Seat of Majesty, the Authors of Laws, and the Creators of Officers to execute them; if they shall find the Power they have conferred abused by their Trustees, their Majesty violated by Tyranny, or by Usurpation, their Authority prostituted to support Violence, or screen Corruption, the Laws grown pernicious through Accidents unforeseen, or unavoidable, or rendered ineffectual through the Infidelity and Corruption of the Executors of them; then it is their Right, and what is their Right is their Duty, to resume that delegated Power, and call their Trustees to an Account; to resist the Usurpation, and extirpate the Tyranny; to restore their sullied Majesty and prostituted Authority; to suspend, alter, or abrogate those Laws, and punish their unfaithful and corrupt Officers. Nor is it the Duty only of the united Body, but every Member of it ought, according to his respective Rank, Power, and Weight in the Community, to concur in advancing and supporting those glorious Designs.

The Obligations of every *Briton* to fulfil the political Duties, receive a vast Accession of *Of Britons.* Strength, when he calls to mind of what a noble and well-balanced Constitution of Government he has the Honour to partake; a Constitution founded on *common Reason, common Consent, and common Good*; a Constitution of free and equal Laws, secured against *arbitrary Will and popular Licence*, by an admirable Temperament of the governing Powers, controuling and controuled by one another. How must every one who has tolerable Understanding to observe, or tolerable Honesty to acknowledge its happy Effects, venerate and love a Constitution, in which the Majesty of the People is, and has been frequently recognized; in which Kings are made and unmade by the Choice of the People; Laws enacted or annulled only by their own Consent, and for their own Good, in which none can be deprived of their Property, abridged of their Freedom, or forfeit their Lives without an Appeal to the Laws, and the Verdict of their Peers or Equals; a Constitution, in fine, the Nurse of Heroes, the Parent of Liberty, the Patron of Learning and Arts, the Dominion of Laws, “the Pride of *Britain*, the Envy of her “Neighbours” and their Sanctuary too! — How dissolute and execrable must their Character and Conduct be, who, instead of sacrificing their *Interest and Ambition*, will not part
with

with the least Degree of Avarice, to preserve inviolate, and entail in full Vigour to their Posterity, such a glorious Constitution, the Labour of so many Ages, and Price of so much Blood and Treasure; but would chuse rather to sacrifice it, and all their own Independency, Freedom, and Dignity, to personal Power, and hollow Grandeur, to any little Pageant of a *King*, who could prefer being the *Master of Slaves* to being the *Guardian of Innocence*, and consider himself as the *Proprietor*, not the *Father* of his People!—But Words cannot express the *Selfishness* and *Servility* of these Men; nor as little the public and heroic Spirit of such, if any such there are, as have Virtue enough still left to them the Torrent of Corruption, and guard our sacred Constitution against the Frowgacy and Prostitution of the Corrupters and the Corrupted.

S E C T. IV.

Duty to God.

OF all the

OF all the *Relations* which the human Mind sustains, that which subsists between the *Creator* and his *Creatures*, the supreme *Lawgiver* and his *Subjects*, is the highest and the best. This Relation arises from the *Nature* of a *Creature* in general, and the *Constitution* of the *human Mind* in particular; the noblest Powers and Affections of which point to an *Universal Mind*, and would be imperfect and abortive without such a Direction. How lone then must that System of Morals be, which leaves a *Duty* out of the Question! How desolate, and how destitute of its firmest Support!

It does not appear, from any true History or Experience of the Mind's Progress, that any Man by any formal Deduction of his discursive Powers ever reasoned himself into the Belief of a God. Whether such a Belief is only some *natural Anticipation* of Soul, or is derived from Father to Son, and from one Man to another, in the way of *Treason*, or is suggested to us in consequence of an *invariable Law of our Nature*, on beholding the august Aspect and beautiful Order of the Universe, we will not pretend to determine. What seems most agreeable to Experience is, that a *Sense* of its *Beauty* and *Grandeur*, and the

admiration

Moral PHILOSOPHY: 533

admirable Fitness of one Thing to another in its vast Apparatus, leads the Mind necessarily and unavoidably to a Perception of *Design*, or of a *designing Cause*, the Origin of all, by a Progress as simple and natural, as that by which a *beautiful Picture*, or a *fine Building* suggests to us the Idea of an *excellent Artist*. For it seems to hold universally true, that wherever we discern a *Tendency*, or *Co-operation of Things towards a certain End*, or producing a common Effect, there, by a necessary *Law of Association*, we apprehend *Design*, a *designing Energy*, or *Cause*. No matter whether the Objects are *natural* or *artificial*, still that Suggestion is unavoidable, and the *Connection* between the *Type* and its *adequate Cause*, obtrudes itself on the Mind, and it requires no nice Search or elaborate Deduction of Reason, to trace or prove that Connection. We are particularly satisfied of its Truth in the Subject before us, by a kind of direct Intuition, and we do not seem to attend to the Maxim we learn in Schools, "That there cannot be an *infinite Series* of *Causes* and *Effects* producing and produced by one another." Nor do we feel a great Accession of Light and Conviction after we have learned it. We are conscious of our *Reason*, of *Thought*, *Sentiment* and *Passion*, and sensible within that these came not of ourselves, therefore we immediately recognize a *Parent-Mind*, an *Original Intelligence*, from whom we borrowed those little Portions of Thought and Activity. And while we not only feel *kind Affections* in ourselves, and discover them in others, but likewise behold round us such a Number and Variety of Creatures, endued with Natures nicely adjusted to their several Stations and Occupations, supporting and supported by each other, and all sustained by a common *Order* of Thing, and sharing different Degrees of Happiness, according to their respective Capacities, we are naturally and necessarily led up to the Idea of both a numerous Offspring, the Possession of such wide-spread Happiness. As we conceive this Being to be wise, able, and greater than all, we naturally, and without reluctance, ascribe to him every kind of Perfection, *Life*, *Power*, and *Goodness*, without *Intermission*, existing through all Time, and pervading all Space. We apply to him the glorious Epithets of our *Creator*, *Preserver*, *Benefactor*, the *Supreme Ruler*, *Lord* and *Father* of the whole Creation, *the Father of our Lord Jesus Christ*, and Immanuel, God with us, the Father of the *Merciful*, *Immerciful*, and *Wise* and *Unwise* of our *Human Race*, the *Author* of our *Existence*, and the *Author* of our *Destiny*.

Minds, connect us with this great and universal Nature. The Mind, in its Progress from Object to Object, from one Character and Prospect of Beauty to another, finds some Blemish or Deficiency in each, and soon exhausts, or grows weary and dissatisfied with its Subject; it sees no Character of Excellency among Men, equal to that Pitch of Esteem which it is capable of exerting; no Object within the Compass of human Things adequate to the Strength of its Affection. Nor can it stop any where in this self-expansive Progress, or find Repose after its highest Flights, till it arrives at a Being of unbounded Greatness and Worth, on whom it may employ its sublimest Powers without exhausting the Subject, and give Scope to the utmost Force and Fullness of its Love, without Satiation or Disgust. So that the Nature of this Being corresponds to the Nature of Man; nor can his intelligent and moral Powers obtain their entire End, but on the Supposition of such a Being, and without a real Sympathy and Communication with him. The native Propensity of the Mind to reverence whatever is *great* and *wonderful* in Nature, finds a proper Object of Homage in him who spread out the Heavens and the Earth, and who sustains and governs the Whole of Things. The *Admiration of Beauty*, the *Love of Order*, and the *Complacency* we feel in *God*, must rise to the highest Pitch, and attain the full Vigour and Joy of their Operations, when they unite in him who is the Sum and Source of all Perfection.

It is evident from the slightest Survey of *Modern* *History*, that how painful soever one may be in performing the Duties which result from our Relations to Mankind, yet to be quite deficient in performing those which arise from our *Relation* to the *Subjects* must appear a strange Perfection of Reason or Dignity of *Power*. If imperfect Degrees of Wealth attract our Veneration, and if the Want of it would imply an Inequality, or, which is worse, an Aversion to Admit, what I must not *Admission* and Humanity of Character must it be to be unaffiliated with, and much more to be ill affected to a *World* of Ignorance and Worth? To love Society, or particular Members of it, and yet to have no Sense of our Connection with it, is the same as not to own a common Parent and Benefactor, to be concerned in the Approbation or Censure of our *Behaviors*, and yet to be nothing of this kind towards them. It is not to be said with our Authors with concerning *Widows* and *Orphans*, that they are *Widows* and *Orphans* with deny being a *Human* and *Family* of *Human* *Kind*.

It is plain therefore beyond all Doubt, that some Regards are due to the great Father of all, in whom every lovely and adorable Quality combines to inspire Veneration and Homage.

As it has been observed already, that our *Affections* depend on our *Opinions* of their Objects, and generally keep pace with them, it must be of the highest Importance, and seems to be among the first Duties we owe to the Author of our Being, "to form the least imperfect, since we cannot form perfect Conceptions of his *Character* and *Administration*." For such *Conceptions* thoroughly imbibed, will render our *Religion* rational, and our *Dispositions* refined. If our *Opinions* are diminutive and distorted, our Religion will be superstitious, and our Temper abject. Thus, if we ascribe to the Deity that false Majesty, which consists in the unbenevolent and swollen Exercise of mere *Will* or *Power*, or suppose him to delight in the Prostrations of servile Fear, or as servile Praise, he will be worshiped with mean Adulation, and a Profusion of Compliments. Farther, if he be looked upon as a stern and implacable Being, delighting in Vengeance, he will be adored with pompous Offerings, Sacrifices, or whatever else may be thought proper to sooth and mollify him. But if we believe *perfect Goodness* to be the Character of the Supreme Being, and that he loves those most who resemble him most, the Worship paid him will be rational and sublime, and his Worshipers will seek to please him, by imitating that Goodness which they adore. The Foundation then of all true Religion is a *rational Faith*. And of a rational Faith these seem to be the chief Articles, to believe, "that an infinite all-perfect Mind exists, who has no Opposite nor any separate Interest from that of his Creatures—that he super-intends and governs all Creatures and Things—that his Goodness extends to all his Creatures, in different Degrees indeed, according to their respective Natures, but without any Partiality or Envy—that he does every thing for the best, or in a Subserviency to the Perfection and Happiness of the Whole—particularly, that he directs and governs the Affairs of Men—inspects their Actions,—distinguishes the *Good* from the *Bad*,—loves and blesses the former,—is displeased with and pities the latter in this World,—and will, according to their respective Deserts, reward one and punish the other in the next—that, in fine, he is always carrying on a Scheme of Virtue and

Right Opinion of God.

"Hm-

concluded directly against the Character, yet whenever ill Passions and Habits pervert the Judgment, and by perverting the Judgment terminate in Atheism, then the Case becomes plainly criminal.

But let Casuists determine this as they will, a true Faith in the divine Character and Administration, is generally the Consequence of a virtuous State of Mind. The Man who is truly and habitually good, feels the *Love of Order, of Beauty, and Goodness*, in the strongest Degree, and therefore cannot be insensible to those Emanations of them which appear in all the Works of God, nor help loving their Supreme Source and Model. He cannot but think, that he who has poured such Beauty and Goodness over all his Works, must himself delight in Beauty and Goodness, and what he delights in must be both amiable and happy. Some indeed there are, and it is pity there should be any such, who through the unhappy Influence of a wrong Education, have entertained dark and unfriendly Thoughts of a Deity, and his Administration, though otherwise of a virtuous Temper themselves. However it must be acknowledged, that such Sentiments have, for the most part, a bad Effect on the Temper; and when they have not, it is because the undepraved Affections of an honest *Heart* are more powerful in their Operation, than the speculative Opinions of an informed *Head*.

The Connection of Theism and Virtue.

But wherever right Conceptions of the Deity and his Providence prevail, when he is considered as the inexhausted Source of Light and Love, and Joy, as acting in the joint Character of a *Father and Governor*, imparting an endless Variety of Capacities to his Creatures, and supplying them with every thing necessary to their full Completion and Happiness, what Veneration and Gratitude must such Conceptions thoroughly believed, excite in the Mind? How natural and delightful must it be to one whose Heart is open to the Perception of Truth, and of every thing *fair, great, and wonderful* in Nature, to contemplate and adore him, who is the first *fair*, the first *great*, and first *wonderful*; in whom *Wisdom, Power, and Goodness* dwell vitally, essentially, originally, and act in perfect Concert? What *Grandeur* is here to fill the most enlarged Capacity, what *Beauty* to engage the most ardent Love, what a Mass of *Wonders* in such Exuberance of Perfection to astonish and delight the human Mind through an unending Duration?

Duties of Gratitude, Love, &c.

Other Affections. If the Deity is considered as our supreme Guardian and Benefactor, as the Father of Mercies, who loves his Creatures with infinite

Tenderness, and, in a particular manner, all good Men, nay all who delights in Goodness even in its most imperfect Degrees; what Resignation, what Dependence, what generous Confidence, what Hope in God, and his all-wise Providence, must arise in the Soul that is possessed of such amiable Views of him? All those Exercises of Piety, and above all a superlative Esteem and Love, are directed to God as to their *natural*, their *ultimate*, and indeed their only *adequate* Object; and though the immense Obligations we have received from him, may excite in us more lively Feelings of divine Goodness than a general and abstracted Contemplation of it, yet the Affections of *Gratitude* and *Love* are of themselves of the generous disinterested kind, not the Result of Self-interest, or Views of Reward.* A perfect Character, in which we always suppose infinite Goodness, guided by unerring Wisdom, and supported by Almighty Power, is the proper Object of perfect Love; and though that Character sustains to us the Relation of a *Benefactor*, yet the Mind deeply struck with that Perfection, is quite lost amidst such a Blaze of Beauty, and grows as it were insensible to those minuter Irradiations of it upon itself. To talk therefore of a *mercenary* Love of God, or which has *Fear* for its principal Ingredient, is equally impious and absurd. If we do not love the loveliest Object in the Universe for his *own* Sake, no Prospect of Good or Fear of Ill can ever bribe our Esteem, or captivate our Love. These Affections are too noble to be bought or sold, or bartered in the Way of *Gain*; *Worth*, or *Merit*, is their Object, and their Reward is something similar in kind. Whoever indulges such Sentiments and Affections towards the Deity, must be confirmed in the Love of Virtue, in a Desire to imitate its all-perfect Pattern, and in a cheerful Security that all his great Concerns, those of his Friends and of the Universe, shall be absolutely safe under the Conduct of unerring Wisdom, and unbounded Goodness. It is in his Care and Providence alone that the good Man, who is anxious for the Happiness of all, finds perfect Serenity, a Serenity neither ruffled by partial Ill, nor soured by private Disappointment.

When we consider the unstained Purity and *Resistance*, absolute Perfection of the *Divine* Nature, and *&c.* reflect withal on the Imperfection and various Blemishes of our own, we must sink, or be convinced we ought to sink, into the deepest Humility and Prostration

* See Butler's Sermon on the Love of God.

stration of Soul before him, who is so wonderfully great and holy. When farther, we call to mind what low and languid Feelings we have of the Divine Presence and Majesty, what Insensibility of his fatherly and universal Goodness, nay what ungrateful Returns we have made to it, how far we come short of the Perfection of his Law, and the Dignity of our own Nature, how much we have indulged to the selfish Passions, and how little to the benevolent ones, we must be conscious that it is our Duty to repent of a Temper and Conduct so unworthy our Nature, and unbecoming our Obligations to its Author, and to resolve and endeavour to act a wiser and better Part for the future. The Connection of our Depravity and Folly with inward Remorse, and many outward Calamities, being established by the Deity himself, is a natural Intimation of his present Displeasure with us; and a Propensity to continue in the same Course, contracted in consequence of the Laws of Habit, gives us just Ground of Fear, that we are obnoxious to his farther Displeasure, as that Propensity gives a Stability to our Vice and Folly, and forbodes our Perseverance in them.

Nevertheless, from the Character which his Works exhibit of him, from those Delays or *Hopes of* Alleviations of Punishment which Offenders *Pardon.* often experience, and from the merciful Tenor of his Administration in many other Instances, the sincere Penitent may entertain good Hopes that his Parent and Judge will not be strict to mark Iniquity, but will be propitious and favourable to him, if he honestly endeavours to avoid his former Practices, and subdue his former Habits, and to live in a greater Conformity to the Divine Will for the future. If any Doubts or Fears should still remain, how far it may be consistent with the Rectitude and Equity of the Divine Government to let his Iniquities pass unpunished, yet he cannot think it unsuitable to his paternal Clemency and Wisdom to contrive a Method of retrieving the penitent Offender, that shall unite and reconcile the Majesty and Mercy of his Government. If Reason cannot of itself suggest such a Scheme, it gives at least some Ground to expect it. But though *natural Religion* cannot let in more Light and Assurance on so interesting a Subject, yet it will teach the humble Theist to wait with great Submission for any farther Intimations it may vouchsafe the Supreme Governor to give of his Will; to examine with Candour and Impartiality, whatever Evidence shall be proposed to him of a *Divine Revelation*, whether that Evidence is *natural* or *supernatural*; to

embrace it with Veneration and Chearfulness, if the Evidence is clear and convincing ; and finally, if it bring to light any *new Relations* or *Connections*, *natural Religion* will persuade its sincere Votary faithfully to comply with the *Obligations*, and perform the *Duties* which result from those Relations and Connections.—This is *Theism*, *Piety*, the *Completion of Morality* !

Worship,
Praise,
Thanksgiv-
ing.

We must farther observe, that all those Affections which we supposed to regard the Deity as their *immediate* and *primary* Object, are vital Energies of the Soul, and consequently exert themselves into Act, and like all its other Energies, gain Strength or greater Activity by that

Exertion. It is therefore our *Duty* as well as highest *Interest*, often at stated Times, and by decent and solemn Acts, to contemplate and adore the great Original of our Existence, the Parent of all Beauty, and of all Good ; to express our Veneration and Love, by an awful and devout Recognition of his Perfections, and to evidence our Gratitude, by celebrating his Goodness, and thankfully acknowledging all his Benefits. It is likewise our Duty, by proper Exercises of Sorrow and Humiliation, to confess our Ingratitude and Folly, to signify our Dependence on God, and our Confidence in his Goodness, by imploring his Blessing and gracious Concurrence in assisting the Weakness, and curing the Corruptions of our Nature ; and finally to testify our Sense of his Authority, and our Faith in his Government, by devoting ourselves to do his Will, and resigning ourselves to his Disposal. These Duties are not therefore obligatory, because the Deity needs or can be profited by them ; but as they are apparently *decent* and *moral*, suitable to the Relations he sustains of our *Creator*, *Benefactor*, *Law-giver*, and *Judge*, expressive of our State and Obligations, and improving to our Tempers, by making us more Rational, Social, God-like, and consequently more Happy.

External
Worship.

We have now considered INTERNAL Piety, or the *Worship of the Mind*, that which is in Spirit and in Truth ; we shall conclude the Section with a short Account of that which is EXTERNAL.

External Worship is founded on the same Principles as *Internal*, and of as strict Moral Obligation. It is either *private* or *public*. *Devotion*, that is *inward*, or *purely intellectual*, is too spiritual and abstracted an Operation for the Bulk of Mankind. The Operations of their Minds, such especially as are employed on the most sublime, immaterial Objects, must be assisted

assisted by their outward Organs, or by some Help from the Imagination, otherwise they will soon be dissipated by sensible Impressions, or grow tiresome if too long continued. Ideas are such fleeting Things, that they must be fixed, and so subtle, that they must be expressed and delineated as it were, by sensible Marks and Images, otherwise we cannot attend to them, nor be much affected by them. THEREFORE *verbal Adoration, Prayer, Praise, Thanksgiving, and Confession*, are admirable Aids to *inward Devotion*, fix our Attention, compose and enliven our Thoughts, impress us more deeply with a Sense of the awful Presence in which we are, and, by a natural and mechanical sort of Influence, tend to heighten those devout Feelings and Affections which we ought to entertain, and after this manner reduce into formal and explicit Act.

This holds true in an higher Degree in the Case of PUBLIC Worship, where the Presence of *Public Worship* our Fellow-creatures, and the powerful Contagion of the *social Affections*, conspire to kindle and spread the devout Flame with greater Warmth and Energy. To conclude: As *God* is the *Parent and Head* of the *social System*, as he has formed us for a *social State*, as by *one* we find the best Security against the Ills of Life, and in the *other* enjoy its greatest Comforts, and as by means of *both*, our Nature attains its highest Improvement and Perfection; and moreover, as there are *public Blessings and Crimes* in which we all share in some Degree, and *public IVants and Dangers* to which all are exposed, it is therefore evident, that the various and solemn Offices of *public Religion*, are Duties of indispensable Moral Obligation, among the best Cements of Society, the firmest Prop of Government, and the fairest Ornament of both.

T H E
E L E M E N T S
O F
Moral PHILOSOPHY.

B O O K III. S E C T. I.

Of Practical Ethics, or the Culture of the Mind.

*Dignity and
Importance
of the Sub-
ject.*

WE have now gone through a particular Detail of the several Duties we owe to OURSELVES, to SOCIETY, and to GOD. In considering the *first Order* of Duties, we just touched on the Methods of acquiring the different kinds of Goods, which we are led by Nature to pursue; only we left the Consideration of the Method of acquiring the *Moral* Goods of the Mind to a Section by itself, because of its singular Importance. This Section then will contain a brief Enumeration of the Arts of acquiring *Virtuous Habits*, and of eradicating *Vicious Ones*, as far as is consistent with the Brevity of such a Work; a Subject of the utmost Difficulty as well as Importance in Morals; to which, nevertheless, the least Attention has been generally given by *Moral Writers*. This will properly follow a Detail of Duty, as it will direct us to such *Means* or *Helps* as are most necessary and conducive to the Practice of it.

*Sensible Ideas
and sensible
Taste.*

In the first Part of this Enquiry we traced the Order in which the Passions shoot up in the different Periods of human Life. That Order is not accidental, or dependent on the Caprice of Men, or the Influence of Custom and

and Education; but arises from the Original Constitution and Laws of our Nature; of which this is one, viz. "That sensible Objects make the first and strongest Impressions on the Mind." These, by means of our outward Organs being conveyed to the Mind, become Objects of its Attention, on which it reflects, when the outward Objects are no longer present, or, in other words, when the Impressions upon the outward Organs cease. These Objects of the Mind's Reflection are called *Ideas* or *Images*. Towards these, by another Law of our Nature, we are not altogether indifferent, but correspondent Movements of *Desire* or *Aversion*, *Love* or *Hatred* arise, according as the Objects, of which they are Images or Copies, made an agreeable or disagreeable Impression on our Organs. Those *Ideas* and *Affections* which we experience in the first Period of Life, we refer to the BODY, or to SENSE; and the TASTE which is formed towards them, we call a SENSIBLE, or a merely NATURAL TASTE; and the Objects corresponding to them we in general call GOOD or PLEASANT.

But, as the Mind moves forward in its Course, it extends its Views, and receives a new and more complex Set of Ideas, in which it observes *Uniformity*, *Variety*, *Similitude*, *Symmetry of Parts*, *Reference to an End*, *Novelty*, *Grandeur*. These compose a vast Train and Diversity of *Imagery*, which the Mind compounds, divides, and moulds into a thousand Forms, in the Absence of those Objects which first introduced it. And this more complicated Imagery suggests a new Train of *Desires* and *Affections*, full as sprightly and engaging as any which have yet appeared. This whole Class of *Perceptions* or *Impressions* is referred to the IMAGINATION, and forms an higher Taste than the *Sensible*, and which has an immediate and mighty Influence on the finer Passions of our Nature, and is commonly termed a FINE TASTE.

The Objects which correspond to this Taste we use to call *beautiful*, *harmonious*, *great*, or *wonderful*, or in general, by the Name of BEAUTY.

The Mind still pushing onwards and increasing its Stock of Ideas, ascends from those to an higher Species of Objects, viz. the Order and Mutual Relations of Minds to each other, their reciprocal *Affections*, *Characters*, *Actions* and various *Aspects*. In these it discovers a *Beauty*, a *Grandeur*, a *Decorum*, more interesting and alluring than

*Ideas of
Beauty and
a fine Taste.*

*Moral Ideas
and a Moral
Taste.*

in any of the former kinds. These Objects, or the Images of them passing in review before the Mind, do, by a necessary Law of our Nature, call forth another and nobler Set of Affections, as *Admiration, Esteem, Love, Honour, Gratitude, Benevolence*, and others of the like Tribe. This Class of *Perfections* and their correspondent *Affections*, we refer because of their Objects (MANNERS) to a MORAL Sense, and call the *Taste* or *Temper* they excite, MORAL. And the Objects which are agreeable to this *Taste* or *Temper* we denominate by the general Name of MORAL BEAUTY, in order to distinguish it from the other which is termed *Natural*.

These different Sets of *Ideas* or *Images* are the Materials about which the Mind employs itself, which it blends, ranges and diversifies ten thousand different ways. It feels a strong Propension to connect and associate those Ideas among which it observes any *Similitude*, or any *Aptitude*, whether *original* and *natural*, or *customary* and *artificial*, to suggest each other. Thus it is ready to associate the Ideas of *Natural* and *Moral* Beauty, as both partake of the same Principle, viz. *Design, Harmony of Parts, or Reference to an End*, and are *Relative to Mind*, the common *Origin* of both. A fine Face, or a graceful Deportment *naturally* suggest Ideas of *Moral* Beauty. And many outward Badges, as Crowns, Crossiers, Purple Robes and Statues, do often, by the force of Custom, excite *Moral* Sentiments, as *Majesty, Piety, Justice, Virtue*. If any particular Sets of Ideas have been found, at any time, to co-exist in the same Objects, the Mind shall ever after have a Propensity to unite them, even when they no longer co-exist. Thus, because we have sometimes seen a good *Temper* accompanying a good *Aspect, Virtue* annexed to *Politeness, Merit to Fame*, we are strongly inclined to fancy that they can never be disunited. When any Ideas or Sets of Ideas have been produced by certain Objects or Occasions immediately and presently, which Objects or Occasions have afterwards given rise to a different and perhaps quite opposite Set of Ideas or Impressions, the same Objects recurring, shall bring in view the *former* Set, while the *latter*, being posterior in time, shall be entirely forgot. Thus the *Drinker* or *Rake*, upon seeing his Bottle, and his Companion, or Mistress, shall amuse himself with all the gay Ideas of agreeable *Fellowship, Friendship, Gentleman-like Enjoyment, giving and receiving Pleasures*, which those Objects first excited, but by an unhappy Self-delusion, shall over-look those *Head-achs, Heart-achs, that Satiety*, and those other mortifying

tying Impressions which accompanied though more laterly, his intemperate Indulgencies.

But whatever the Reasons are, whether *Similitude*, *Co-existence*, *Causality*, or any other *Law of Association*, why any two or more Ideas are connected by the Mind at first, it is an established Law of our Nature, "that when two or more Ideas have often started in Company, they form so strong an Union, that it is very difficult ever after to separate them." Thus the *Lover* cannot separate the Idea of *Merit* from his *Mistress*; the *Courtier* that of *Dignity* from his *Title* or *Ribbon*; the *Miser* that of *Happiness* from his *Bags*. Here the Mind's Process is often the same as in its more abstracted Operations. When it has once been convinced of the Truth of any Geometrical Proposition, it may strongly retain the Connection of the Terms of the Proposition, suppose the Equality of the Angles of a Triangle to two Right ones, though it does not attend to, or has perhaps forgot, the intervening Ideas which shewed that Connection. In like manner, though perhaps it was the Tendency of *Wealth* or *Power*, when well employed, to private Pleasure, or public Happiness, that gave the fond Admirers of either the first Notion of their Value, yet their Mind having once settled that Connection, frequently forgets the immediate Link, *viz.* the *wise* or *generous Use*, and by degrees comes to admire Wealth and Power for themselves, fancying them *intrinsically* valuable, however they are used, and whether used or not. By these and many other Ways the strongest Associations of Ideas are formed, the different Sets of Ideas before mentioned are shuffled together without Regularity or Distinction, often without any *Natural Alliance* or *Relation*, by mere Accident, Example, Company, Sympathy, Education, and sometimes by Caprice. So that any kind of *Natural Good* shall be combined with *Moral Beauty*, nay Ideas the most opposite in Nature shall be coupled together, so as hardly to be ever disunited in the Observer's Mind: as for Instance, *Prudence* with *Craft*, *Honour* with *Injustice*, *Religion* with *Inhumanity*, *Corruption* or *Sedition* with *Patriotism*.—It is these Associations of *Worth* or *Happiness* with any of the different Sets of *Objects* or *Images* before specified, that form our *Taste*, or *Complex Idea* of *Good*. By another Law of our Nature, "our *Affections* follow and are governed by this *Taste*. And to these *Affections* our *Character* and *Conduct* are similar and proportioned, on " the

"the general Tenor of which our *Happiness* principally depends."

As all our *Leading Passions* then depend on the Direction which our *Taste* takes, and as it is always of the same Strain with our *Leading Associations*, it is worth while to enquire a little more particularly how these are formed, in order to detect the secret Sources from whence our Passions derive their principal Strength, their various Rises and Falls. For this will give us the true Key to their Management, and let us into the right Method of correcting the *bad*, and improving the *good*.

A very slight Inspection into human Nature suggests to us, that no kind of Objects make so powerful an Impression on us as those which are immediately impressed on our *Senses*, or strongly painted on our *Imaginations*. Whatever is purely *Intellectual*, as abstracted or scientific Truths, the subtle Relations and Differences of Things, has a fainter Sort of Existence in the Mind; and though it may exercise and whet the *Memory*, the *Judgment*, or the *Reasoning Power*, gives hardly any Impulse at all to the *Active Powers*, the *Passions*, which are the main Springs of Motion. On the other hand, were the Mind entirely under the Direction of *Sense*, and impossible only by such Objects as are present, and strike some of the outward Organs, we should then be precisely in the State of the Brute Creation, and be governed solely by *Instinct* or *Appetite*, and have no Power to controul whatever Impressions are made upon us: Nature has therefore endued us with a MIDDLE FACULTY, wonderfully adapted to our MIXED State, which holds partly of *Sense* and partly of *Reason*, being strongly allied to the former, and the common Receptacle in which all the Notices that come from that Quarter are treasured up, and yet greatly subservient and ministerial to the latter, by giving a Body, a Coherence, and Beauty to its Conceptions. This middle Faculty is called the IMAGINATION, one of the most busy and fruitful Powers of the Mind. Into this common Storehouse are likewise carried all those *Moral Images* or *Forms* which are derived from our *Moral Faculties* of Perception, and there they often undergo new Changes and Appearances, by being mixed and wrought up with the Images and Forms of *Sensible* or *Natural Things*. By this Coalition of Imagery, *Natural Beauty* is dignified and heightened by *Moral Qualities and Perfections*, and *Moral Qualities* are

are at once exhibited, and set off by *Natural Beauty*. The *Sensible Beauty*, or Good, is refined from its Dross by partaking of the *Moral*, and the *Moral* receives a Stamp, a visible Character and Currency from the *Sensible*.—But in order to judge of this mutual Influence, it will be proper to give a few Instances of the Process of the *Imagination*, or of the Energy of the *associating Principle*.

As we are first of all accustomed to *sensible Impressions* and *sensible Enjoyments*, we contract early a *Sensual Relish*, or *Love of Pleasure* in the lower Sense of the Word. In order however to justify this Relish, the Mind, as it becomes open to *higher Perceptions of Beauty and Good*, borrows from thence a nobler Set of *Images*, as *fine Taste, Generosity, social Affection, Friendship, good Fellowship*, and the like; and, by dressing out the old Pursuits with these new Ornaments, gives them an additional Dignity and Lustre. By these ways the *Desire of a Table, Love of Finery, Intrigue, and Pleasure*, are vastly increased beyond their natural Pitch, having an Impulse combined of the Force of the *natural Appetites* and of the super-added Strength of those *Passions* which tend to the *Moral Species*.—When the Mind becomes more sensible to those Objects or Appearances, in which it perceives *Beauty, Uniformity, Grandeur, and Harmony*, as *fine Cloaths, elegant Furniture, Plate, Pictures, Gardens, Houses, Equipage, the Beauty of Animals*, and particularly the Attractions of the Sex; to these Objects the Mind is led by *Nature*, or taught by *Custom*, the *Opinion* and *Example* of others, to annex certain Ideas of *Moral Character, Dignity, Decorum, Honour, Liberality, Tenderness, and Active or Social Enjoyment*. The Consequence of this Association is, that the Objects to which these are annexed, must rise in their Value, and be pursued with proportionable Ardor. The *Enjoyment* of them is often attended with *Pleasure*, and the mere *Possession* of them, where that is wanting, frequently draws Respect from one's Fellow-creatures: this *Respect* is, by many, thought equivalent to the Pleasure of *Enjoyment*. Hence it happens that the Idea of *Happiness* is connected with the mere *Possession*, which is therefore eagerly sought after, without any Regard to the *generous Use, or honourable Enjoyment*. Thus the Passion resting on the *Means*, not the *End, i. e.* losing sight of its *natural Object*, becomes wild and extravagant.

Its Energy in various Instances, in heightening sensible Pleasures.

In heightening the Pleasures of Beauty, Harmony, &c.

*Tracing
the Value of
external
Symbols, &c.*

In fine, any *Object*, or *External Denomination*, a *Staff*, a *Garter*, a *Cup*, a *Crown*, a *Title*, may become a *Moral Badge* or *Emblem of Merit*, *Magnificence* or *Honour*, according as these have been found, or thought by the Possessors or Admirers of them to accompany them; yet, by the Deception formerly mentioned, the *Merit* or the *Conduct* which entitled, or should entitle, to those Marks of Distinction, shall be forgot or neglected, and the *Badges* themselves be passionately affected, or pursued, as including every Excellency. If these are attained by any means, all the Concomitants which *Nature*, *Custom*, or *Accidents* have joined to them, will be supposed to follow of course. Thus, *Moral Ends*, with which the unhappy Admirer is apt to colour over his Passion and Views, will, in his opinion, justify the most *Immoral Means*, as *Prostitution*, *Adulation*, *Fraud*, *Treachery*, and every Species of *Knavery*, whether more open or more disguised.

*In brighten-
ing the Value
of Wealth,
Power, &c.*

When Men are once engaged in *Active Life*, and find that *Wealth* and *Power*, generally called *INTEREST*, are the great *Avenues* to every kind of Enjoyment, they are apt to throw in many engaging *Moral Forms* to the Object of their Pursuit, in order to justify their Passion, and varnish over the Measures they take to gratify it, as *Independence on the Vices or Passions* of others, *Provision and Security to themselves and Friends*, *Prudent Oeconomy* or well-placed *Charity*, *Social Communication*, *Superiority to their Enemies*, who are all Villains, *honourable Service*, and many other Ingredients of *Merit*. To attain such Capacities of *Usefulness* or *Enjoyment*, what Arts, nay what Meannesses can be thought blameable by those cool Pursuers of Interest?—Nor have they, whom the gay World is pleased to indulge with the Title of *Men of Pleasure*, their Imaginations less pregnant with *Moral Images*, with which they never fail to ennoble, or, if they cannot do that, to palliate their gross Pursuits. Thus *Admiration of Wit*, of *Sentiments* and *Merit*, *Friendship*, *Love*, *generous Sympathy*, *mutual Confidence*, *giving and receiving Pleasure*, are the ordinary Ingredients with which they season their Gallantry and pleasurable Entertainments; and by which they impose on themselves and endeavour to impose on others, that *their Amours* are the joint Issue of Good-sense and Virtue.

These *Associations*, variously combined and proportioned by the *Imagination*, form the chief *private Passions*, which govern the Lives of the Generality, as the *Love of Action*, of *Pleasure*, *Power*, *Wealth*, and *Fame*; they influence the *defensive*, and affect the *public Passions*, and raise *Joy* or *Sorrow*, as they are gratified or disappointed. So that in effect, these *Associations of Good and Evil*, *Beauty and Deformity*, and the *Passions* they raise, are the main *Hinges of Life and Manners*, and the great *Sources of our Happiness or Misery*. It is evident, therefore, that the whole of *Moral Culture* must depend on giving a right *Direction* to the *Leading Passions*, and duly proportioning them to the *Value* of the *Objects* or *Goods* pursued, under what Name soever they may appear.

Its Influence on all the Passions.

Now, in order to give them this *right Direction* and *due Proportion*, it appears, from the foregoing Detail, that those *Associations of Ideas*, upon which the *Passions* depend, must be duly regulated; that is to say, as an exorbitant *Passion for Wealth, Pleasure, or Power*, flows from an *Association or Opinion* that more *Beauty and Good*, whether *Natural or Moral*, enters into the *Enjoyment or Possession* of them, than really belongs to either; therefore, in restoring those *Passions* to their just *Proportion*, we must begin with correcting the *Opinion*, or breaking the *false Association*, or, in other words, we must decompose the *complex Phantasm of Happiness or Good*, which we fondly admire; disunite those *Ideas*, that have no natural *Alliance*; and separate the *Original Idea of Wealth, Power, or Pleasure*, from the foreign *Mixtures* incorporated with it, which enhance its *Value*, or give it its chief *Power* to enchant and seduce the *Mind*. For instance, let it be considered how poor and inconsiderable a thing *Wealth* is, if it be disjoined from *real Use*, or from *Ideas of Capacity* in the Possessor to do good, from *Independency, Generosity, Provision for a Family or Friends, and Social Communication* with others. By this *Standard* let its true *Value* be fixed; let its *Misapplication*, or *unbenevolent Enjoyment* be accounted *fordid and infamous*; and nothing worthy or estimable be ascribed to the *mere Possession* of it, which is not borrowed from its *generous Use*.

Moral Culture, by correcting our Taste or Imagination.

If that *complex Form of Good* which is called *Pleasure*, engages us, let it be analysed into its constituent *Principles*, or those *Allurements* it draws from the *Heart* and *Imagination*, in order to heighten the low part

By Self-denial, and a Counter-Process.

of the Indulgence; let the *separate* and *comparative* Moment of each be distinctly ascertained, and deduced from that gross part, and this Remainder of the accumulative Enjoyment will dwindle down into a poor, insipid, transitory Thing. In proportion as the *Opinion* of the *Good* pursued abates, the *Admiration* must decay, and the *Passion* lose Strength of course. One effectual way to lower the *Opinion*, and consequently to weaken the *Habit* founded on it, is to practise lesser pieces of Self-denial, or to abstain, to a certain pitch, from the Pursuit or Enjoyment of the favourite Object; and, that this may be the more easily accomplished, one must avoid those Occasions, that Company, those Places, and the other Circumstances that enflamed *one* and endeared the *other*. And, as a *Counter-process*, let *higher* or even *different* Enjoyments be brought in view, other Passions played upon the former, different Places frequented, other Exercises tried, Company kept with Persons of a different, or more correct way of thinking, both in *Natural* and *Moral* Subjects.

As much depends on our setting out well in Life, let the *Youthful* Fancy, which is apt to be very florid and luxuriant, be early accustom'd, by *Instruction*, *Example*, and significant *Moral Exercises*, nay by Looks, Gestures, and every other Testimony of just Approbation or Blame, to annex Ideas of *Merit*, *Honour* and *Happiness*, not to *Birth*, *Dress*, *Rank*, *Beauty*, *Fortune*, *Power*, *Popularity*, and the like *outward* Things, but to *Moral* and *truly virtuous Qualities*, and to those *Enjoyments* which spring from a well-informed Judgment, and a regular Conduct of the Affections, especially those of the *social* and *disinterested* kind. Such dignified Forms of *Beauty* and *Good*, often suggested, and, by moving Pictures and Examples, warmly recommended to the *Imagination*, enforced by the Authority of *Conscience*, and demonstrated by *Reason* to be the surest Means of Enjoyment, and the only independent, undeprivable and durable Goods, will be the best Counter-balance to meaner Passions, and the firmest Foundation and Security to Virtue.

It is of great Importance to the forming a *just Taste*, or pure and large Conceptions of Happiness, to study and understand *Human Nature*. By rightly studying *Human Nature*, to remember what a complicated System it is, particularly to have deeply imprinted on our Mind that GRADATION of *Senses*, *Faculties*, and *Powers of Enjoyment* formerly mentioned, and the *Subordination* of *Goods* resulting from thence, which Nature points out,

out; and the Experience of Mankind confirms; who, when they think seriously, and are not under the immediate Influence of some violent Prejudice or Passion, prefer not the Pleasures of *Action, Contemplation, Society*, and most Exercises and Joy of the *Moral* kind, as *Friendship, Natural Affection*, and the like, to all *Sensual* Gratifications whatsoever? Where the different Species of Pleasure are blended into one *Complex Form*, let them be accurately distinguished, and be referred each to its proper *Faculty* and *Sense*, and examined apart what they have peculiar, what common with others, and what foreign and adventitious: Let *Wealth, Grandeur, Luxury, Love, Fame*, and the like, be tried by this Test, and their true Alloy will be found out. — Let it be farther considered, whether the Mind may not be easy and enjoy itself greatly, though it want many of those Elegancies and Superfluities of Life which some possess, or that Load of Wealth and Power which others eagerly pursue, and under which they groan. Let the Difficulty of attaining, the Precariousness of possessing, and the many Abatements in enjoying, over-grown Wealth and envied Greatness, of which the weary Possessors so frequently complain, as the Hurry of Business, the Burthen of Company, of paying Attendance to the *Few*, and giving it to the *Many*, the Cares of keeping, the Fears of losing, and the Desires of increasing what they have, and the other Troubles which accompany this pitiful Drudgery and pompous Servitude, let these and the like Circumstances be often considered, that are conducive to the removing or lessening the *Opinion* of such Goods, and the attendant *Passion* or *Set of Passions* will decay of course.

By comparing the Moments and Abatements of different Goods.

Let the peculiar Bent of our Nature and Character be observed, whether we are most inclined to form Associations and relish Objects of the *Sensible, Intellectual, or Moral* kind. Let that which has the Ascendant be particularly watched, let it be directed to right Objects, be improved by proportioned Exercises, and guarded by proper Checks from an opposite Quarter. Thus, the *Sensible* turn may be exalted by the *Intellectual*, and a Taste for the Beauty of the *fine Arts*, and both may be made subservient to convey and rivet Sentiments highly *Moral* and *Public-spirited*. This inward Survey must extend to the *Strength* and *Weaknesses* of one's Nature, one's *Condition, Connections, Habitudes, Fortune, Studies, Acquaintance*, and the other Circumstances of one's Life, from which every Man will form the justest Estimate of his

By observing our own turn and Character, &c.

his own Dispositions and Character, and the best Rules for correcting and improving them. And, in order to do this with more advantage, let those *Times*, or *critical Seasons* be watched, when the Mind is best disposed towards a Change, and let them be improved by vigorous *Resolutions*, *Promises*, or whatever else will engage the Mind to persevere in Virtue. Let the *Conduct*, in fine, be often reviewed, and the *Causes* of its *Corruption* or *Improvement* be carefully observed.

It will greatly conduce to refine the *Moral Taste* and strengthen the *Virtuous Temper*, to accustom the Mind to the frequent Exercise of *Moral Sentiments* and *Determinations*, by reading *History*, *Poetry*, particularly of the *Picturesque* and *Dramatic* kind, the Study of the *fine Arts*; by conversing with the most eminent for Good-sense and Virtue; but above all, by frequent and repeated Acts of *Humanity*, *Compassion*, *Friendship*, *Politeness*, and *Hospitality*. It is Exercise gives Health and Strength. He that reasons most frequently becomes the wisest, and most enjoys the Pleasures of Wisdom. He who is most often affected by Objects of Compassion in *Poetry*, *History*, or *real Life*, will have his Soul most open to Pity, and its delightful Pains and Duties. So he also who practises most diligently the Offices of Kindness and Charity, will by it cultivate that Disposition, from whence all his Pretensions to personal Merit must arise, his present and his future Happiness.

An useful and honourable Employment in Life will administer a thousand Opportunities of this kind, and greatly strengthen a Sense of Virtue and good Affections, which must be nourished by right Training, as well as our Understandings. For such an Employment, by enlarging one's Experience, giving an Habit of Attention and Caution, or obliging one from Necessity or Interest, to keep a Guard over the Passions, and study the outward Decencies and Appearances of Virtue, will by degrees produce good Habit, and at length insinuate the Love of Virtue and Honesty for its own Sake.

It is a great Inducement to the Exercise of Benevolence to view *Human Nature* in a favourable Light, to observe the Characters and Circumstances of Mankind on the *fairest* Sides, to put the best Constructions on their Actions they will bear, and to consider them as the Result of *partial* and *mistaken*, rather than *ill* Affections,

Reactions, or, at worst, as the Excesses of a pardonable Self-love, seldom or never the Effect of pure Malice.

Above all, the *Nature* and *Consequences* of *Virtue* and *Vice*, their Consequences being the *Law* of our Nature and Will of Heaven; the *Light* in which they appear to our Supreme *Parent* and *Lawgiver*, and the Reception they will meet with from him, must be often attended to. The Exercises of *Piety*, as *Adoration*, and *Praise* of the *Divine* Excellency, *Invocation* of, and *Dependence* on his Aid, *Confession*, *Thanksgiving*, and *Resignation*, are habitually to be indulged, and frequently performed, not only as *medicinal*, but highly *improving* to the Temper.

By Consideration and pious Exercises.

To conclude: It will be of admirable Efficacy towards eradicating *bad* Habits, and implanting *good* ones, frequently to contemplate *Human* Life, as the great *Nursery* of our *future* and *immortal* Existence, as that *State* of *Probation*, in which we are to be educated for a *Divine* Life. To remember, that our *Virtues* or *Vices* will be *immortal* as ourselves, and influence our *future* as well as our *present* Happiness—and therefore, that every Disposition and Action is to be regarded as pointing beyond the *present* to an *immortal* Duration. An habitual Attention to this wide and important *Connection* will give a vast Compass and Dignity to our Sentiments and Actions, a noble Superiority to the Pleasures and Pains of Life, and a generous Ambition to make our *Virtue* as *immortal* as our *Being*.

By just Views of Human Life and its Connection with a future.

S E C T. II.

Motives to Virtue from personal Happiness.

WE have already considered our *Obligations* to the Practice of *Virtue*, arising from the *Constitution* of our Nature, by which we are led to approve a certain *Order* and *Quantity* of *Affections*, and a certain *Course* of *Action* correspondent to it.†—But besides this, there are several

Motives from personal Happiness.

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† Vid. Book I. c. 3. 1. 2. 3.

veral Motives, which strengthen and secure Virtue, though not themselves of a *Moral* kind. These are, its *Tendency to personal Happiness*, and the *contrary Tendency of Vice*. "Personal Happiness arises, either from the State of a Man's own Mind, or from the State and Disposition of external Causes towards him."

We shall first examine the "Tendency of Happiness of Virtue from within." "Virtue to Happiness with respect to the State of a Man's own Mind."—This is a Point of the utmost Consequence in Morals, because, unless we can convince ourselves, or shew to others, that, by doing our *Duty*, or fulfilling our *Moral Obligations*, we consult the greatest Satisfaction of our own Mind, or our highest Interest on the whole, it will raise strong and often unfurmountable Prejudices against the Practice of Virtue, especially whenever there arises any Appearances of *Opposition* between our *Duty*, and our *Satisfaction* or *Interest*. To Creatures so desirous of Happiness, and averse to Misery, as we are, and often so oddly situated amidst contending Passions and Interests, it is necessary that Virtue appear not only an *honourable*, but a *pleasing* and *beneficent* Form. And in order to justify our Choice to ourselves, as well as before others, we must ourselves feel and be able to avow in the Face of the whole World, that *her* Ways are Ways of Pleasantry, and her Paths the Paths of Peace. This will shew, beyond all Contradiction, that we not only approve, but can give a sufficient Reason for what we do.

Let any Man, in a cool Hour, when he is disengaged from Business, and undisturbed by Passion, as such cool Hours will sometimes happen, sit down, and seriously reflect with himself what State or Temper of Mind he would chuse to feel and indulge, in order to be easy and to enjoy himself. Would he chuse, for that purpose, to be in a constant Dissipation and Hurry of Thought; to be disturbed in the Exercise of his Reason; to have various, and often interfering Phantoms of Good playing before his Imagination, soliciting and distracting him by turns, now soothing him with amusing Hopes, then torturing him with anxious Fears; and to approve this Minute what he shall condemn the next? Would he chuse to have a strong and painful Sense of every petty Injury; quick Apprehensions of every impending Evil; incessant and insatiable Desires of Power, Wealth, Honour, Pleasure; an irreconcilable Antipathy against all Competitors and Rivals; insolent and tyrannical Dis-

*Influence of
Vice on the
Temper of
the Mind.*

Dispositions to all below him; fawning, and at the same time envious, Dispositions to all above him; with dark Suspicions and Jealousies of every Mortal? Would he chuse neither to love nor be beloved of any, to have no Friend in whom to confide, or with whom to interchange his Sentiments or Designs; no Favourite, on whom to bestow his Kindness, or vent his Passions; in fine, to be conscious of no Merit with Mankind, no Esteem from any Creature, no good Affection to his Maker, no Concern for, nor Hopes of his Approbation; but instead of all these, to hate, and know that he is hated, to contemn, and know that he is contemned by all; by the Good, because he is so unlike; and by the Bad, because he is so like themselves; to hate or to dread the very Being that made him; and in short, to have his Breast the Seat of Pride and Passion, Petulance and Revenge, deep Melancholy, cool Malignity, and all the other Furies that ever possessed and tortured Mankind?—Would our calm Enquirer after Happiness pitch on such a State, and such a Temper of Mind, as the most likely means to put him in possession of his desired Ease and Self-enjoyment?

Or would he rather chuse a serene and easy Flow of Thought; a Reason clear and composed; a Judgment unbiaſſed by Prejudice, and undistracted by Passion; a sober and well-governed Fancy, which presents the Images of Things true and unmixed with delusive and unnatural Charms, and therefore administers no improper or dangerous Fuel to the Passions, but leaves the Mind free to chuse or reject, as becomes a reasonable Creature; a sweet and sedate Temper, not easily ruffled by Hopes or Fears, prone neither to Suspicion nor Revenge, apt to view Men and Things in the fairest Lights, and to bend gently to the Humours of others rather than obstinately to contend with them? Would he chuse such Moderation and Continnence of Mind, as neither to be ambitious of *Power*, fond of *Honours*, covetous of *Wealth*, nor a Slave to *Pleasure*; a Mind of course neither elated with Success, nor dejected with Disappointment; such a modest and noble Spirit as supports Power without Insolence, wears Honour without Pride, uses Wealth without Profusion or Parsimony; and rejoices more in giving than in receiving Pleasure; such Fortitude and Equanimity as rises above Misfortunes, or turns them into Blessings; such Integrity and Greatness of Mind, as neither flatters the Vices, nor triumphs over the Follies of Men; as equally spurns Servitude and Tyranny, and will neither engage in low Designs, nor abet them in others? Would he

*Influence of
Virtue on the
Temper.*

chuse, in fine, such Mildness and Benignity of Heart as takes part in all the Joys, and refuses none of the Sorrows of others; stands well-affected to all Mankind; is conscious of meriting the Esteem of all, and of being beloved by the best; a Mind which delights in doing good without any Show, and yet arrogates nothing on that account, rejoices in loving and being beloved by its Maker, acts ever under his Eye, resigns itself to his Providence, and triumphs in his Approbation?—Which of these Dispositions would be his Choice, in order to be contented, serene and happy!—The *former* Temper is VICE, the *latter* VIRTUE. Where *One* prevails, there MISERY prevails, and by the Generality is acknowledged to prevail. Where the *other* reigns, there HAPPINESS reigns, and by the Confession of Mankind is acknowledged to reign. The *Perfection* of either Temper is *Misery*, or *Happiness in Perfection*. THEREFORE every *Approach* to *either Extreme*, is an *Approach* to *Misery*, or to *Happiness*; that is to say, every *Degree* of *Vice* or *Virtue* is accompanied with a *proportionable Degree* of *Misery* or *Happiness*.

But many are of opinion, and by their Practice seem to avow the Opinion, that, by blending or softening the Extremes, and artfully reconciling *Virtue* with *Vice*, they bid fairer to strike a just *Medium* of Happiness, to pass more smoothly through Life, and to have more Resources in the present embarrassed Scene. HONESTY (they acknowledge) “ is, in the main, “ the best *Policy*, but it is often too blunt and surly, and “ always too scrupulous, and therefore to temper and “ season it with a little discreet Craft in critical and well- “ chosen Conjunctions, will, they think, make it more palatable to others and more profitable to one’s self. Kind “ Affection is a good Thing in its own Place, and when it “ costs a Man nothing; but *Charity* begins at home; and “ one’s Regard for others must still look that way, and be “ subservient to the main Chance. Besides, why suffer unnecessary Disquiet on the Account of others? Our own “ Happiness is Charge enough to us; and if we are not to be “ happy till others are so too, it is a mere *Utopian* Dream ever “ to expect it. One would not chuse to do Ill for the sake “ of Ill, but when *Necessity* requires it, the *lesser* Good must “ submit to the *greater*, that is, to our own *personal* Good; “ for in it, by the *first* and *fundamental* Law of our Nature, “ we are most interested. By such a Conduct we shall have “ least Reason to accuse ourselves, be most easy within, and “ best

An Objection from imaginary Coalition of Virtue and Vice.

“ best secured against the Misfortunes and Assaults of
“ others.”

This is the Language of great Partiality of Thought, as well as great Partiality of Heart. —But as it is one of the main Forts in which *Selfishness* and *Knavery* use to intrench themselves, it may be worth while to beat it down, to make way for the full Triumphs of their fair Adversary. That Men may neglect, or hurt their own Interest by an *indiscreet* Concern about that of others—that *Honesty* may sometimes degenerate into a *blunt Surliness*, or a *pedantic Scrupulosity*—that important Occasions may demand the Sacrifice of a *less* public, to a *greater private* Good—that it were Folly to make one's self miserable, because others are not so happy as one would wish, we do not deny. But is there not the justest reason to suspect, that the *dishonest*, or the *half-honest* and *contracted* Turn of Mind here pleaded for, is the very reverse of that *Temper* which begets true Satisfaction and Self-enjoyment, and of the *Character* which entitles to Credit, Security, and Success? The Man who doubts and hesitates, whether he may not, in some Instances, play the Knave, cannot, in any Sense, be termed honest. And surely, he cannot approve himself for that Conduct; which, by an inviolable Law of his Nature, he is compelled to condemn; and if he cannot approve himself for his Conduct, he is deprived of one of the sweetest Feelings of the human Heart. But suppose he could disguise the immoral Deed or Disposition under the fair Name of some Virtue, or the Mask at least of a necessary Self-regard, as is often done, to elude the awful Decision of Conscience, which when uninfluenced is always unerring; yet he must be conscious he cannot stand the Test of *Judges less interested* than himself; and *must therefore* be under constant Dread of Discovery, and consequently of public Censure, with all its mortifying Attendants. This Dread must be so much the greater, if he has had Companions or Tools of his Knavery, which generally it must have in order to supply its native Impotence and Deficiency. This then is to be *insecure, obnoxious, and dependent*, and that too on the worst Set of Men, on whom one can have no hold but by their Vices, which, like undisciplined wild Beasts, often turn upon their Masters. Such an *insecure, obnoxious, dependent* State, must necessarily be a State of *Suspicion, Servitude, and Fear*, which instead of begetting Serenity and Self-enjoyment, are the Parents of Dis-

*The Temper
and Condi-
tion of Half-
honesty or
Knavery.*

quiet and Misery. Besides, the fluctuating perpetually between opposite Principles, the Violence done to a native Sense of Honesty, the Reluctance against the first Advances of young and blushing Knavery, the hot and cold Fits of alternate Virtue and Vice, the Suspense and Irresolution of a Mind distracted between interfering Passions, are the first painful Symptoms of that dreadful Disease which afterwards lays waste every thing goodly and ingenuous, and raises Agonies intolerable to the Patient, and quite inconceivable by others. Whether such an inconsistent Conduct, divided between Vice and Virtue, will serve the Views of Interest proposed by it, will be afterwards examined.

*Temper and
Condition of
the good be-
nevolent
Man.*

As to the other Part of the Objection, let it be considered, that a Man of an enlarged benevolent Mind, who thinks, feels, and acts for others, is not subject to half the Disquietudes of the contracted selfish Soul; — finds a thousand Alleviations to soften his Disappointments, which the other wants; — and has a fair Chance for double his Enjoyments. His Desires are moderate, and his Wants few in Comparison of the other's, because they are measured by Nature, which has Limits, not by Fancy or Passion, which has none. He is cautious, without being distrustful or jealous; careful, but not anxious; busy, but not distracted. He tastes Pleasure, without being dissipated; bears Pain, without Dejection or Discontent; is raised to Power, without turning giddy; feels few of the Pains of Competition, and none of the Pains of Envy.

*The Allevia-
tions of his
Ills.*

The principal Alleviations of his Calamities are these: — that, though some of them may have been the Effect of his Imprudence, or Weakness, yet few of them are sharpened by a Sense of Guilt, and none of them by a Consciousness of Wickedness, which surely is their keenest Sting; — that they are common to him with the best of Men; — that they seldom or never attack him quite unprepared, but rather guarded with a Consciousness of his own Sincerity and Virtue, with a Faith and Trust in Providence, and a firm Resignation to its perfect Orders; — that they may be improved as means of Correction, or Materials to give Scope and Stability to his Virtues; — and to name no more, they are considerably lessened, and often sweetened to him by the general Sympathy of the Wise and Good.

His

His Enjoyments are more numerous, or, if less numerous, yet more intense than those of the *bad Man*; for he shares in the Joys of others by Rebound; and every Increase of *general* or *particular* Happiness is a real Addition to his own. It is true, his friendly *Sympathy* with others subjects him to some Pains which the hard-hearted Wretch does not feel; yet to give a loose to it is a kind of agreeable Discharge. It is such a Sorrow as he loves to indulge; a sort of pleasing Anguish that sweetly melts the Mind, and terminates in a Self-approving Joy. Though the good Man may want Means to execute, or be disappointed in the Success of his benevolent Purposes, yet, as was formerly * observed, he is still conscious of good Affection, and that Consciousness is an Enjoyment of a more delightful Savour than the greatest Triumphs of successful Vice. If the *Ambitious*, *Covetous*, or *Voluptuous* are disappointed, their Passions recoil upon them with a Fury proportioned to their Opinion of the Value of what they pursue, and their Hope of Success; while they have nothing within to balance the Disappointment, unless it is a useful Fund of Pride, which *however* frequently turns mere Accidents into mortifying Affronts, and exalts Grief into Rage and Frenzy. Whereas the meek, humble, and benevolent Temper is its own immediate Reward, is satisfied from within, and as it magnifies greatly the Pleasure of Success, so it wonderfully alleviates, and in a manner annihilates, all Pain for the want of it.

His Enjoyments.

As the good Man is conscious of loving and wishing well to all Mankind, he must be sensible of his deserving the Esteem and Goodwill of all; and this supposed Reciprocation of social Feelings, is, by the very Frame of our Nature, made a Source of very intense and enlivening Joys. By this Sympathy of Affections and Interests he feels himself intimately united with the Human Race; and being sensibly *alive* over the whole System, his Heart receives, and becomes responsive to every Touch given to any Part. So that as an eminent *Philosopher* † finely expresses it, he gathers Contentment and Delight from the pleased and happy States of those around him, from Accounts and Relations of such Happiness, from the very Countenances, Gestures, Voices and Sounds even of Creatures foreign to our kind,

From merited Esteem and Sympathy.

A a 4

whole

* See Book 2. Sect. 2.

† Vid. Shaftsb. *Inq. into Virtue*, Book 2.

360. Moral PHILOSOPHY.

whose Signs of Joy and Contentment he can any way discern.

Nor do those generous Affections stop any other natural Source of Joy whatever, or deaden his Sense of any innocent Gratification. They rather keep the several *Senses* and *Powers of Enjoyment* open and disengaged, intense and uncorrupted by Riot or Abuse; as is evident to any one who considers the dissipated, unfeeling State of Men of *Pleasure, Ambition, or Interest*, and compares it with the serene and gentle State of a Mind at peace with itself, and friendly to all Mankind, unruffled by any violent Emotion, and sensible to every good-natured and alluring Joy. He who daily dwells with *Temperance* and *Virtue*, those everlasting Beauties and of the highest Order, cannot be insensible to the Charms of Society, or Friendship, the Attractions of virtuous Love, the Delights of Reading, or to any Beauty of a lower Species, the Unbendings of innocent Mirth, or whatever else sets the Soul at Ease, and gives him a Relish of his Being. By enjoying himself, he is in the best Posture for enjoying every thing else. All is pure and well-ordered in such a Heart, and therefore whatever Pleasure is poured into it has an original Savour, not a single Drop is lost. For Virtue draws off all but the Dregs, and by mixing something of her own with the most ordinary Entertainments, refines them into exalted Enjoyments.

It were easy, by going through the different Sets of Affections mentioned formerly*, to shew, that it is only by maintaining the Proportion settled there that the Mind arrives at true Repose and Satisfaction. If *Fear* exceeds that Proportion, it sinks into Melancholy and Dejection. If *Anger* passes just Bounds, it ferments into Rage and Revenge, or subsides into a sullen corroding Gloom, which embitters every Good, and renders one exquisitely sensible to every Ill. The *Private Passions*, the *Love of Honour* especially, whose Impulses are more generous as its Effects are more diffusive, are Instruments of private Pleasure; but if they are disproportioned to our *Wants*, or to the *Value* of their several Objects, or to the *Balance* of other Passions, equally necessary, and more amiable, they become Instruments of intense Pain and Misery. For, being now destitute of that Counter-poise which held them at a due pitch,

The Misery of Excess in the Private Passions.

* See Book I. §. 1, 2.

pitch, they grow turbulent, peevish, and revengeful, the Cause of constant Restlessness and Torment, sometimes flying out into a wild delirious Joy, at other times settling in a deep splanetic Grief. The Concert between Reason and Passion is then broke: all is Dissonance and Distraction within. The Mind is out of Frame, and feels an Agony proportioned to the Violence of the reigning Passion.

The Case is much the same, or rather worse, when any of the particular *kind* Affections are out of their natural Order and Proportion; as happens in the case of *effeminate Pity*, *exorbitant Love*, *parental Dotage*, or any *Party Passion*, where the just Regards to Society are supplanted. The more *social* and *disinterested* the Passion is, it breaks out into the wilder Excesses, and makes the more dreadful Havock, both within and abroad; as is but too apparent in those Cases where a false Species of *Religion*, *Honour*, *Zeal*, or *Party Rage* has seized on the natural Enthusiasm of the Mind, and worked it up to Madness. It breaks through all Ties, *Natural* and *Civil*, contracts the most sacred and solemn Obligations, silences every other Affection, whether *Public* or *Private*, and transforms the most gentle Natures into the most savage and inhuman. Such an exorbitant Passion is like the enormous Growth of a natural Member, which not only draws from the Nourishment of the rest, but threatens the Mortification of the whole Body, and in the mean time occasions intolerable Pain and Anguish. In fine, all the *natural* Affections, like the animal Spirits, or Humours of a strong Body, if restrained from their proper Play, turn furious or melancholic, and generally force their way by some violent Discharge, no less hurtful to the Patient than offensive to those with whom he is connected.

Whereas the Man who keeps the *Balance* of *Affection* even, is easy and serene in his Motions; mild, and yet affectionate; uniform and consistent with himself; is not liable to disagreeable Collisions of Interests and Passions; gives always place to the most friendly and humane Affections, and never to Dispositions of Acts of Resentment, but on high Occasions, when the *Security* of the *private*, or *Welfare* of the *public* System, or the *great Interests* of Mankind necessarily require a noble Indignation; and even then he observes a just Measure in Wrath; and last of all he proportions every Passion to the Value of the Object he affects, or to the Importance of the End he pursues,

362 *Moral PHILOSOPHY.*

To sum up this Part of the Argument, the *Sum of the* *honest* and *good* Man has eminently the Advantage of the *knave* and *selfish* Wretch in every respect. The Pleasures which the *last* enjoys flow chiefly from external Advantages and Gratifications; are superficial and transitory; dashed with long Intervals of Satiety, and frequent Returns of Remorse and Fear; dependent on favourable Accidents and Conjunctures; and subjected to the Humours of Men. But the *good* Man is satisfied from himself; his principal Possessions lie within, and therefore beyond the Reach of the Caprice of Men or Fortune; his Enjoyments are exquisite and permanent; accompanied with no inward Checks to damp them, and always with Ideas of Dignity and Self-approbation; may be tasted at any Time and in any Place*. The Gratifications of *Vice* are turbulent and unnatural, generally arising from the Relief of Passions in themselves intolerable, and issuing in tormenting Reflections; often irritated by Disappointment, always inflamed by Enjoyment; and yet ever cloyed with Repetition. The Pleasures of *Virtue* are calm and natural; flowing from the Exercise of kind Affections, or delightful Reflections in consequence of them; not only agreeable in the Prospect, but in the present Feeling; they never satiate, or lose their Relish; nay, rather the Admiration of Virtue grows stronger every Day; and not only is the Desire but the Enjoyment heightened by every new Gratification; and unlike to most others, it is increased, not diminished, by Sympathy and Communication. In fine, the Satisfaction of Virtue may be purchased without a Bribe, and possessed in the humblest, as well as the most triumphant Fortune; they can bear the strictest Review, do not change with Circumstances, nor grow old with Time. Force cannot rob, nor Fraud cheat us of them; and, to crown all, instead of abating, they enhance every other Pleasure.

*External
Effects of
Virtue.*

But the happy Consequences of *Virtue* are seen, not only in the Internal Enjoyments it affords a Man, but “in the favourable Disposition of External Causes towards him, to which it contributes.”

On the Body.

As VIRTUE gives the sober Possession of one's self and the Command of one's Passions, the Consequence must be Heart's Ease, and a fine natural Flow of Spirits, which conduce

* *Vid.* the late ingenious *Dial.* on Happiness by J. H.

more than any thing else to Health and long Life. violent Passions, and the Excesses they occasion, greatly impair and wear down the Machine. But the calm and State of a temperate Mind, and the healthful Exercise in which *Virtue* engages her faithful votaries, preserve natural Functions in full Vigour and Harmony, and exalt the Spirits, which are the chief Instruments of Action.

We might add, what will appear perhaps too refined, as *Virtue* is the sound Temperament and beautiful complexion of the Soul, so it even diffuses sometimes a congenial Air of Beauty over the Body, lights up, and spreads the Countenance into a certain Openness, Cheerfulness

Dignity, those natural Irradiations of inward Worth, which *Politeness*, that *Ape of Virtue*, may imitate, but cannot fully attain.—In fine, *Temperance*, which has been called sometimes the *Mother*, and at other times the *Nurse* of the *Muses*, is beautifully described by an ingenious Author*, to that *Virtue* without Pride, and *Fortune* without Envy, gives Indolence of Body and Tranquillity of Mind; the Guardian of Youth and Support of old Age, the Tutel-Goddess of Health, and universal Medicine of Life, that rests the Head, strengthens the Nerves, enlightens the Eyes, comforts the Heart.

may by some be thought odd to assert,

Virtue is no Enemy to a Man's *Fortune* On one's Fortune, Intereſt, &c.
the present State of Things. — But if, by *Fortune*, be meant a moderate or competent share of *Wealth*, *Power*, or *Credit*, not overgrown Degrees of them, what should hinder the virtuous Man from obtaining that? He cannot cringe or fawn, it is true, he can be civil and obliging as well as the Knave; and finally, his Civility is more alluring, because it has more Manners and Grace in it than the mean Adulation of the other; cannot cheat or undermine, but he may be cautious, prompt, watchful of Occasions, and equally prompt with the Knave in improving them; he scorns to prostitute himself as a Slave to the Passions, or as a Tool to the Vices of Mankind, but he may have as sound an Understanding and as great Capacities for promoting their real Interests as the vilest Slave; and then, he is more faithful and true to those who employ him. In the common Course of Business, he has the same Chances with the Knave of acquiring a Fortune, and rising in the World. He may have equal Abilities, equal

* See Temple's *Miscell.* Part 1. *Treat.* 6.

equal Industry, equal Attention to Business; and in other respects he has greatly the Advantage of him. People love better to deal with him; they can trust him more; they know he will not impose on them, nor take Advantage of them, and can depend more on his Word than on the Oath or strongest Securities of others. Whereas what is commonly called CUNNING, which is the *Offspring of Ignorance*, and constant *Companion of Knavery*, is not only a mean-spirited, but a very short-sighted Talent, and a fundamental Obstacle in the Road of Business. It may procure indeed immediate and petty Gains, but it is attended with dreadful Abatements, which do more than over-balance them, both as it sinks a Man's Credit when discovered, and cramps that Largeness of Mind, which extends to the remotest as well as the nearest Interest, and takes in the most durable, equally with the most transient Gains. It is therefore easy to see how much a Man's *Credit* and *Reputation*, and consequently his Success, depend on his Honesty and Virtue. The truly good Man has no Character to personate, no Mask to wear; his Designs are transparent, and one Part of his Discourse and Conduct exactly tallies with another. Having no sordid Views to promote, no mean Passions to serve, but wishing well to every body, and doing all the Good he can, he is intrenched and guarded round by *Innocence* and *Virtue*; and, though he is not secured against Misfortunes, yet his Character and the Friends his Merit has procured him will frequently retrieve him. Whereas *Tricking*, as one well expresses it, is a sort of Disguise, by which a Man hides himself in one Place, and exposes himself in another. Besides, *Falseness* and *Roguery* are variable unsettled Things, and the Source of a Conduct both irresolute and inconsistent. They must often change hands, and be ever contriving new Expedients as Accidents vary; and one lame Measure must always limp on after another to support and back it. So that an inexhausted Fund of Craft is necessary to play the Knave to any purpose, and to maintain for any time a counterfeit Character. When he is once detected, his Credit is blown for ever; and, unless he is a great Master in Dissimulation, his artificial Conduct will ever render him obnoxious to Suspicion, which is ever sharp-sighted. Even the good Man is not secure against the Attacks of Calumny, but he is armed against its Sting. If he cannot silence, he will confute Detraction by obstinately persisting in being virtuous and doing good; in time almighty Truth will prevail, and he might extort Veneration from the *Partial*, as well as obtain a cheerful Tribute from the *Candid*.

Candid Judges of Merit. But should the Cloud, in which Malice or Envy may have involved his Virtue, never be entirely dissipated in his Life, yet Death, that Soother of Envy and the Malevolent Passions, will totally dispel any remaining Gloom, and display his Character in all its genuine and unstained Glory. For the *Bed of Virtue* is a *Bed of Honour*, and he who dies in it, cannot die *unlamented* by the Good, nor *unreverenced* by the Bad.

With regard to *Security* and *Peace* with his Neighbours, it may be thought perhaps, that the Man of a quiet forgiving Temper, and a flowing Benevolence and Courtesy, is much exposed to Injury and Affronts from every proud or peevish Mortal, who has the Power or Will to do Mischief. If we suppose indeed, this *Quietness* and *Gentleness* of Nature accompanied with *Cowardice* or *Puffanimity*, this may often be the Case; but in reality, the good Man is bold as a Lion, and so much the bolder for being the calmer. Such a Person will hardly be a Butt to Mankind. The ill-natured will be afraid to provoke him, and the good-natured will not incline to do it. Besides, *true Virtue*, which is conducted by Reason, and exerted gracefully and without Parade, is a most insinuating and commanding Thing; if it cannot disarm Malice and Repentment at once, it will wear them out by Degrees, and subdue them at length. How many have, by Favours and prudently yielding, triumphed over an Enemy, who would have been inflamed into tenfold Rage by the fiercest Opposition! In fine, *Goodness* is the most universally popular Thing that can be. Though the Prejudices or Passions of Men may sometimes dress it up in the Disguise of Weakness, or deface it with unlovely Features, yet let the Mask be dropt, and the lovely Form appear as it is, the most prejudiced will respect, the unprejudiced admire and love it, and all will be afraid, or at least ashamed, to traduce or offend a Thing so innocent and so God-like.

*On one's
Peace and
Security.*

To conclude, the good Man may have some Enemies, but he will have more Friends, and having given so many Marks of private Friendship or public Virtue, he can hardly be destitute of a Patron to protect, or a Sanctuary to entertain him, or to entertain or protect his Children when he is gone. Tho' he should have little else to leave them, he bequeaths them the fairest, and generally the most unenvied Inheritance of a *good Name*, which, like good Seed sown in the Field of Futurity, will often raise up unsolicited Friends, and yield a bene-

*On one's
Family.*

366 *Moral PHILOSOPHY.*

Benevolent Harvest of unexpected Charities. But should the Fragrance of the Parent's Virtue prove offensive to a perverse or envious Age, or even draw Persecution on the friendless Orphans, there is *One* in Heaven, who will be more than a Father to them, and recompense their Parent's Virtues by showering down Blessings on them. The Thoughts of leaving them in such good Hands sustain the honest Parent, and make him smile in the Agonies of Death; being secure that that almighty Friend, who has dispensed such a Profusion of Bounties to himself, cannot prove an unkind Guardian, or an unfaithful Trustee to his fatherless Offspring.—This leads to consider a sublime Motive, and noble Mould to Virtue, from whence it derives its firmest Support, and in which it receives its highest Finishing and Lustre.

S E C T. III.

Motives to Virtue from the BEING and PROVIDENCE of God.

Two external Motives to Virtue.

BESIDES the interesting Motive mentioned in the last Section, there are two great Motives to *Virtue*, strictly connected with human Life, and resulting from the very Constitution of the human Mind. The First is the BEING and PROVIDENCE of GOD; the Second is the IMMORTALITY of the SOUL, with future Rewards and Punishments.

Their Importance. It appears from Sect. 4. of Book II. that Man, by the Constitution of his Nature, is designed to be a RELIGIOUS Creature. He is intimately connected with the Deity, and necessarily dependent on him. From that Connection and necessary Dependence result various Obligations and Duties, without fulfilling which, some of his sublimest Powers and Affections would be incomplete and abortive. If he be likewise an IMMORTAL Creature, and if his present Conduct shall affect his future Happiness in another State as well as in the present, it is evident that we take only a partial View of the Creature if we leave out this important Property of his Nature,

ture, and make a *partial Estimate of human Life*, if we strike out of the Account, or overlook that Part of his Duration which runs out into Eternity.—We shall therefore consider the Motives which arise from the former Connection in this *Section*, and those arising from the latter in the *next*.

It is evident from the above-mentioned *Section*, * that “ to have a Respect to the *Deity* in *Piety*.

“ our Temper and Conduct, to *venerate* and *love*
 “ his *Character*, to *adore* his *Goodness*, to *depend upon* and *re-*
 “ *sign* ourselves to his *Providence*, to *seek* his *Approbation*, and
 “ *act* under a *Sense* of his *Authority*, is a *fundamental Part* of
 “ *Moral Virtue*, and the *Completion* of the *highest Destination* of
 “ *our Nature*.”

But as *Piety* is an essential Part of *Virtue*,
 so likewise it is a *great Support* and *Enforcement* to
 the Practice of it. To contemplate and admire
 a Being of such transcendent Dignity and Perfection
 as God, must naturally and necessarily open and enlarge
 the Mind, give a Freedom and Ampleness to its Powers, and
 a Grandeur and Elevation to its Aims. For, as an excellent
Divine † observes, “ the Greatness of an Object, and the
 “ Excellency of the Act of any AGENT about a transcendent
 “ Object, doth mightily tend to the Enlargement and Im-
 “ provement of his Faculties.” Little Objects, mean Com-
 pany, mean Cares, and mean Business cramp the Mind, con-
 tract its Views, and give it a creeping Air and Deportment.
 But when it soars above mortal Cares and mortal Pursuits, into
 the Regions of Divinity, and converses with the greatest and
 best of Beings, it spreads itself into a wider Compass, takes
 higher Flights in Reason and Goodness, and becomes God-like
 in its Air and Manners. *Virtue* is, if one may say so, both the
Effect and *Cause* of Largeness of Mind. It requires that one
 think *freely*, and act *nobly*. Now what can conduce more to
 Freedom of Thought and Dignity of Action, than to conceive
 worthily of God, to reverence and adore his unrivalled Excel-
 lency, to imitate and transcribe that Excellency into our own
 Nature, to remember our Relation to him, and that we are the
 Image and Representatives of his Glory to the rest of the
 Creation? Such Feelings and Exercises must and will make
 us scorn all Actions that are base, unhandsome, or unworthy
 our State; and the Relation we stand in to God, will irra-
 diate

* *Señ. 4. Book II.*

† *Vid. Whichcot's Sermon. Part II. Sermon. VI.*

diate the Mind with the Light of Wisdom, and ennoble it with the Liberty and Dominion of Virtue.

*A Guard
and En-
forcement to
Virtue.*

The Influence and Efficacy of *Religion* may be considered in another Light. We all know that the Presence of a Friend, a Neighbour, or any Number of Spectators, but especially an august Assembly of them, uses to be a considerable Check upon the Conduct of one who is not lost to all Sense of Honour and Shame, and contributes to restrain many irregular Sallies of Passion. In the same manner we may imagine, that the Awe of some superior Mind, who is supposed privy to our secret Conduct, and armed with full Power to reward or punish it, will impose a Restraint on us in such Actions as fall not under the Controul or Animadversion of others. If we go still higher, and suppose our inmost Thoughts and darkest Designs, as well as our most secret Actions, to lie open to the Notice of the Supreme and Universal Mind, who is both the *Spectator* and *Judge* of human Actions, it is evident that the Belief of so august a Presence, and such awful Inspection, must carry a Restraint and Weight with it proportioned to the Strength of that Belief, and be an additional Motive to the Practice of many Duties which would not have been performed without it.—As our *Sense of Honour or Blame* is increased in proportion to the Esteem we have of those who bestow either, shall we suppose no Sensibility to the Applause, or Censure of him whom we believe to be the *Judge* as well as *Standard* of all Perfection? And if we suppose such a Sensibility, can we deny that it will operate on every Mind which feels it, both as an *Incentive* to deserve that Applause, and as a *Guard* to avoid that Censure? We may suppose some Cases in which the virtuous Man, through the Force of Prejudices against him, and because of the false Lights in which his Actions are viewed, may be tempted to renounce the honest Cause by which he happens to incur Reproach or Ridicule. But if he can make his Appeal from the Opinions of Men to the Searcher of Hearts, it is evident that the Consciousness of so high a Sanction may bear him out in his Course, and consequently be a Support to his Virtue, and in due time may teach him to despise the Strife of Tongues, nay the utmost Efforts of Malice and Envy.

*In Cases of
the greatest
Trial.*

But a good Man may likewise fall a Sacrifice to Power or to Injustice; his Life may be a Series of Misfortunes, and his Virtue may have exposed him to many of them; the Constitution and State of his Body, and peculiar

culiar Pressures on his Mind may incapacitate him for enjoying the natural Fruits of Virtue, at least with an high Relish. How supporting in such a Case, nay how preservative must it be to his Integrity, and what an Antidote against that Gloom and Fretfulness which are apt to invade the Mind in such Circumstances of Trial, to believe that infinite Wisdom and Goodness preside in the Universe;—that every Event being under their Direction is the Cause or Consequence of some greater Good to him, or to the whole;—that those Misfortunes which befall him are appointed by Heaven to correct his Follies, to improve or secure his Virtues, and consequently to increase his Happiness! These Sentiments thoroughly felt, must and will serve as a Charm to sooth his Sorrows, and confirm his Loyalty and Resignation to the Supreme Providence.

In fine, let the Disposition of external Causes be ever so unfavourable to the good Man, yet, as he is conscious that the Almighty Governor is his *Parent, Patron and Friend*, he may rest secure that he will either sustain and guard him in the midst of his Troubles, or direct and over-rule them to his greatest Good.

It may be observed farther, that “to live under an habitual Sense of the *Deity* and his great *Administration*, is to be conversant with *Wisdom, Order and Beauty*, in the highest Subjects, and to receive the delightful Reflections and benign Feelings which these excite, while they irradiate upon him from every Scene of Nature and Providence.” How improving must such Views be to the Mind, in dilating and exalting it above those puny Interests and Competitions which agitate and enflame the Bulk of Mankind against each other! What genial and propitious Influence on the Temper must the *Admiration and Love of Divine Goodness* have, when it is considered as diffused through infinite Space, to infinite Races of Creatures, and stretching from Eternity to Eternity! What Candor, Mildness, Benignity of Heart, and what Grandeur as well as Sweetness of Manners must it inspire? To conclude, with what alluring and commanding Energy must his *Benefits* call forth our *Gratitude*, his *Example* our *Imitation*, his *Wisdom, Power and Goodness*, our *Confidence and Hope*, his *Applause* our *Ambition* to deserve it? And how must his *Presence* strongly believed, or rather powerfully felt, enliven and fortify these and every other Principle of Virtue?

Exercises of Piety improving to Virtue.

S E C T. IV.

Motive to Virtue, from the Immortality of the Soul, &c.

*Metaphysical
Arguments
for its Im-
mortality.*

THE other Motive mentioned was the *Im-
mortality* of the Soul, with *future Rewards*
and *Punishments*. The *metaphysical* Proofs of the
Soul's Immortality, are commonly drawn from its
simple, uncompounded, and indivisible Nature, from
whence it is concluded, that it cannot be cor-
rupted or extinguished by a Dissolution or Destruction of
Parts,—from its having a *Beginning* of *Action* within itself,
whence it is inferred, that it cannot discontinue and lose its
Motion,—from the different Properties of *Matter* and *Mind*,
the *Sluggishness* and *Inactivity* of *one*, and the immense *Activity*
of the *other*, its prodigious *Flight* of *Thought* and *Imagination*,
its *Penetration*, *Memory*, *Forefight*, and *Anticipations* of *Futu-
rity*, from whence it is concluded, that a Being of so *divine* a
Nature cannot be extinguished. But as these metaphysical
Proofs depend on intricate Reasonings concerning the *Nature*,
Properties, and *Distinctions* of *Body* and *Mind*, with which we
are not very well acquainted, they are not obvious to ordinary
Understandings, and are seldom so convincing even to those of
higher Reach, as not to leave some Doubts behind them.
Therefore perhaps it is not so safe to rest the Proof of such an
important Article, on what many may call the Subtilties of
School-Learning. Those Proofs which are brought from
Analogy, from the *moral Constitution* and *Phænomena* of the hu-
man Mind, the *moral Attributes* of God, and the *present Course*
of *Things*, and which are therefore called the *moral* Argu-
ments, are the plainest, and generally the most satisfying. We
shall select only one or two from the rest.

*Moral Proof
from Analogy.*

In tracing the *Nature* and *Destination* of any
Being, we form the surest Judgment from his
Powers of *Action*, and the *Scope* and *Limits* of
these compared with his *State*, or with that *Field*
in which they are exercised. If this Being passes through dif-
ferent States, or Fields of Action, and we find a *Succession* of
Powers adapted to the different Periods of his Progress, we
conclude that he was destined for those successive States, and
reckon his Nature *Progressive*. If, besides the immediate
Set of Powers which fit him for Action in his present State,
we observe another Set which appears superfluous, if he was to
be

be confined to it, and which point to another or higher one, we naturally conclude, that he is not designed to remain in his present State, but to advance to that for which those supernumerary Powers are adapted. Thus we argue that the *Insect*, which has Wings forming or formed, and all the Apparatus proper for Flight, is not destined always to creep on the Ground, or to continue in the torpid State of adhering to a Wall, but is designed in its Season to take its Flight in Air. Without this farther Destination, the admirable Mechanism of Wings and the other Apparatus, would be useless and absurd. The same kind of Reasoning may be applied to Man, while he lives only a sort of *vegetative* Life in the Womb. He is furnished even there with a beautiful Apparatus of Organs, Eyes, Ears, and other delicate Senses, which receive Nourishment indeed, but are in a manner folded up, and have no proper Exercise or Use in their present Confinement.* Let us suppose some intelligent Spectator, who never had any Connection with Man, nor the least Acquaintance with human Affairs, to see this odd Phænomenon, a Creature formed after such a manner, and placed in a Situation apparently unsuitable to such various Machinery, must he not be strangely puzzled about the Use of his complicated Structure, and reckon such a Profusion of Art and admirable Workmanship lost on the Subject; or reason by Way of Anticipation, that a Creature, endued with such various, yet unexerted Capacities, was destined for a more enlarged Sphere of Action, in which those latent Capacities shall have full Play? The vast Variety, and yet beautiful Symmetry and Proportions of the several Parts and Organs with which the Creature is endued, and their apt Cohesion with, and Dependence on, the curious Receptacle of their Life and Nourishment, would forbid his concluding the Whole to be the Birth of Chance, or the bungling Effort of an unskilful Artist, at least would make him demur a while at so harsh a Sentence. But if, while he is in this State of Uncertainty, we suppose him to see the Babe, after a few successful Struggles, throwing off his Fetters, breaking loose from his little dark Prison, and emerging into open Day, then unfolding his recluse and dormant Powers, breathing in Air, gazing at Light, admitting Colours, Sounds, and all the *fair Variety* of Nature, immediately his Doubts clear up, the Propriety and Excellency of the Workmanship dawn upon him with full Lustre, and the whole Mystery of the first Period is unravelled by the opening of this new Scene. Though in this *second* Period the Creature lives chiefly a kind of *animal* Life, *i. e.* of *Sense* and *Appetite*, yet by

B b 2

various,

* *Vid.* Ludov. Viv. *de Rel. Christi. Lib. II. de Vita Uteri, &c.*

various Trials and Observations, he gains Experience, and by the gradual Evolution of the Powers of *Imagination*, he ripens apace for an *higher* Life, for exercising the Arts of *Design* and *Imitation*, and of those in which Strength or Dexterity are more requisite than Acuteness or Reach of Judgment. In the succeeding *rational* or *intellectual* Period, his *Understanding*, which formerly crept in a lower, mounts into an higher Sphere, canvasses the Natures, judges of the Relations of Things, forms Schemes, deduces Consequences from what is past, and from present as well as past, collects future Events. By this Succession of States, and of correspondent Culture, he grows up at length into a *moral*, a *social*, and a *political* Creature. This is the last Period, at which we perceive him to arrive in this his mortal Career. Each *Period* is introductory to the next succeeding one ; each *Life* is a Field of Exercise and Improvement for the next higher one, the Life of the *Fœtus* for that of the *Infant*, the Life of the *Infant* for that of the *Child*, and all the lower for the highest and best.*—But is this the last Period of Nature's Progression ? Is this the utmost Extent of her Plot, where she winds up the Drama, and dismisses the Actor into eternal Oblivion ? Or does he appear to be invested with supernumerary Powers, which have not full Exercise and Scope, even in the last Scene, and reach not that Maturity or Perfection of which they are capable ; and therefore point to some higher Scene where he is to sustain another and more important Character than he has yet sustained ? If any such there are, may we not conclude by Analogy, or in the same Way of Anticipation as before, that he is destined for that After-part, and is to be produced upon a more august and solemn Stage, where his sublimer Powers shall have proportioned Action, and its Nature attain its Completion ?

*Powers in
Man which
point to an
After-Life.*

Intellectual.

If we attend to that *Curiosity*, or prodigious *Thirst of Knowledge*, which is natural to the Mind in every Period of its Progress, and consider withal the endless Round of Business and Care, and the various Hardships to which the Bulk of Mankind are chained down, it is evident, that in this present State, it is impossible to expect the Gratification of an Appetite at once so insatiable and so noble. Our *Senses*, the ordinary Organs by which Knowledge is let into the Mind, are always imperfect, and often fallacious ; the Advantages of assisting, or correcting them, are possessed by few ; the Difficulties of finding out Truth amidst the various and contradictory Opinions, Interests,

and

* See Butler's Analogy, Part I.

and Passions of Mankind, are many ; and the Wants of the Creature, and of those with whom he is connected, numerous and urgent ; so that it may be said of most Men, that their *intellectual* Organs are as much shut up and secluded from proper Nourishment and Exercise in that little Circle to which they are confined, as the *bodily* Organs are in the Womb. Nay, those who to an aspiring Genius have added all the Assistances of Art, Leisure, and the most liberal Education, what narrow Prospects can even they take of this unbounded Scene of Things from that little Eminence on which they stand ? And how eagerly do they still grasp at new Discoveries, without any Satisfaction or Limit to their Ambition ?

But should it be said, that Man is made for *Action*, and not for *Speculation*, or fruitless *Moral Searches* after Knowledge, we ask, for what *Powers* kind of Action ? Is it only for *bodily* Exercises, or for *moral, political, and religious* ones ? Of all these he is capable, yet by the unavoidable Circumstances of his Lot, he is tied down to the *former*, and has hardly any Leisure to think of the *latter*, or, if he has, wants the proper Instruments of exerting them. The *Love of Virtue, of one's Friends and Country, the generous Sympathy with Mankind, and heroic Zeal of doing Good*, which are all so *natural* to great and good Minds, and some Traces of which are found in the lowest, are seldom united with proportioned Means or Opportunities of exercising them ; so that the *moral* Spring, the noble Energies and Impulses of the Mind, can hardly find proper Scope, even in the most fortunate Condition ; but are much depressed in some, and almost entirely restrained in the Generality, by the numerous Clogs of an indigent, sickly, or embarrassed Life. Were such mighty Powers, such God-like Affections planted in the human Breast to be folded up in the narrow Womb of our present Existence, never to be produced into a more *perfect* Life, nor to expatiate in the ample Career of Immortality ?

Let it be considered, at the same time, that no Possession, no Enjoyment within the Round of Mortal Things is commensurate to the Desires, or adequate to the Capacities of the Mind. The most exalted Condition has its Abatements, the happiest Conjunction of Fortune leaves many Wishes behind, and after the highest Gratifications, the Mind is carried forward in pursuit of new ones without End. Add to all, the fond *Desires* of Immortality, the secret *Dread* of *Non-existence*, and the high unremitting

*Unsatisfied
Desires of
Existence
and Happi-
ness, &c.*

374 Moral PHILOSOPHY.

Pulse of the-Soul beating for *Perfection*, joined to the Improbability or the Impossibility of attaining it *here* ; and then judge whether this elaborate Structure, this magnificent Apparatus of inward Powers and Organs, does not plainly point out an *Here-after, and intimate Eternity to Man* ? Does Nature give the finishing Touches to the lesser and ignobler Instances of her Skill, and raise every other Creature to the Maturity and Perfection of his Being, and shall she leave her principal Workmanship unfinished ? Does she carry the *Vegetative* and *Animal* Life in *Man* to their full Vigour, and highest Destination, and shall she suffer his *Intellectual*, his *Moral*, his *Divine* Life to fade away, and be for ever extinguished ? Would such Abortions in the *Moral* World be congruous to that *Perfection of Wisdom and Goodness*, which upholds and adorns the *Natural* ?

Therefore We must therefore conclude, from this De-
Man immor- tail, that the *Present State*, even at its best, is
tal. only the WOMB of Man's Being, in which the noblest Principles of his Nature are in a manner fettered, or secluded from a correspon-

dent Sphere of Action, and therefore destined for a future and unbounded State, where they shall emancipate themselves, and exert the Fulness of their Strength. The most accomplished Mortal, in this low and dark Apartment of Nature, is only the *Rudiments* of what he shall be, when he takes his *Ethereal* Flight, and puts on Immortality. Without a Reference to that State, *Man* were a mere Abortion, a rude unfinished Embryo, a Monster in Nature. But this being once supposed, he still maintains his Rank, of the Master-piece of the Creation ; his latent Powers are all suitable to the *Harmony* and *Progression* of Nature, his noble Aspirations, and the Pains of his Dissolution, are his Efforts towards a *second* Birth, the Pangs of his Delivery into Light, Liberty, and Perfection ; and *Death*, his Discharge from Gail, his Separation from his Fellow-Prisoners, and Introduction into the Assembly of those heroic Spirits who are gone before him, and of their great *Eternal* Parent. The Fetters of his Mortal Coil being loosened, and his Prison-Walls broke down, he will be bare and open on every Side to the Admission of *Truth* and *Virtue*, and their fair Attendant, *Happiness* ; every *Vital* and *Intellectual* Spring will evolve itself, with a divine Elasticity, in the free Air of Heaven. He will not then peep at the Universe and its glorious Author through a dark Grate, or a gross Medium, nor receive the Reflections of his Glory through the strait Openings of sensible Organs, but will be *all Eye, all Ear, all Ethereal*
and

and Divine Feeling.†—Let one part however of the Analogy be attended to, that, as in the Womb we receive our Original Constitution, Form, and the essential *Stamina* of our Being, which we carry along with us into the Light, and which greatly affect the succeeding Periods of our Life; so our Temper and Condition in the *future* Life will depend on the Conduct we have observed, and the Character we have formed in the *present* Life. We are *here* in *Miniature* what we shall be at *full Length here-after*. The first *rude Sketch*, or *Out-lines* of *Reason* and *Virtue*, must be drawn at present, to be afterwards enlarged to the *Stature* and *Beauty* of Angels.

This, if duly attended to, must prove not only a *Guard*, but an admirable *Incentive* to Virtue. For he who faithfully and ardently follows the Lights of Knowledge, and pants after higher Improvements in Virtue, will be wonderfully animated and inflamed in that Pursuit, by a full Conviction that the Scene does not close with Life—that his Struggles arising from the Weakness of Nature, and the Strength of Habit, will be turned into Triumphs—that his Career in the Track of Wisdom and Goodness will be both swifter and smoother—and those generous Ardors with which he glows towards *Heaven*, *i. e.* the *Perfection* and *Immortality of Virtue*, will find their adequate Object and Exercise in a Sphere proportionably enlarged, incorruptible, immortal. On the other hand, what an inexpressible Damp must it be to the good Man, to dread the total Extinction of that *Light* and *Virtue*, without which *Life*, nay *Immortality* itself, were not worth a single Wish?

*Immortality
a Guard and
Incentive to
Virtue.*

Many Writers draw their Proofs of the Immortality of the Soul, and of a future State of Rewards and Punishments, from the unequal Distribution of these here. It cannot be dissembled that wicked Men often escape the *outward* Punishment due to their Crimes, and do not feel the *inward* in that measure their Demerit seems to require, partly from the Calousness induced upon their Nature by the Habits of Vice, and partly from the Dissipation of their Minds abroad by Pleasure or Business—and sometimes good Men do not reap all the natural and genuine Fruits of their Virtue, through the many unforeseen or unavoidable Calamities in which they are involved. This, no doubt, upon the Supposition of an all-wise and good Providence, were an Argument, and a strong one too, for a future State, in which those Inequalities shall be corrected.

*Proof from
the Inequality
of present
Distribu-
tions.*

B b 4

But

† *Vid. Relig. of Nat. §. 9.*

But unless we suppose a *prepollent good Order* in the present Scene of Things, we weaken the Proof of the *Divine Administration*, and the Presumption of any better Order in any future Period of it.

*Belief of Im-
mortality,
&c. a great
Support a-
midst Trials.*

From *Section the second* of this *Book* it appears, that *Virtue* has present Rewards, and *Vice* present Punishments annexed to it, such Rewards and Punishments as make *Virtue*, in most Cases that happen, far more eligible than *Vice*; but, in the infinite Variety of Human Contingencies, it may sometimes fall out, that the inflexible Practice of *Virtue* shall deprive a Man of considerable Advantages to himself, his Family, or Friends, which he might gain by a well-timed piece of Roguery, suppose by betraying his Trust, voting against his Conscience, selling his Country, or any other Crime, where the Security against Discovery shall heighten the Temptation. Or, it may happen, that a strict Adherence to his Honour, to his Religion, to the Cause of Liberty and *Virtue*, shall expose him, or his Family, to the Loss of every thing, nay to Poverty, Slavery, Death itself, or to Torments far more intolerable. Now, what shall secure a Man's *Virtue* in Circumstances of such Trial? What shall enforce the Obligations of Conscience against the Allurements of so many Interests, the Dread of so many and so terrible Evils, and the almost unsurmountable Aversion of human Nature to excessive Pain? The Conflict is the greater, when the Circumstances of the Crime are such as easily admit a Variety of Alleviations from *Necessity*, *Natural Affection*, *Love to one's Family*, or *Friends*, perhaps in Indigence: These will give it even the Air of *Virtue*. Add to all, that the Crime may be thought to have few bad Consequences,—may be easily concealed,—or imagined possible to be retrieved in a good measure, by future good Conduct. It is obvious to which Side most Men will lean in such a Case, and how much need there is of a Balance in the opposite Scale, from the Consideration of a *God*, of a *Providence*, and of an *immortal State of Retribution*, to keep the Mind firm and uncorrupt in those or like Instances of singular Trial, or Distress.

But without supposing such peculiar Instances, a Sense of a Governing Mind, and a Persuasion that *Virtue* is not only befriended by him here, but will be crowned by him hereafter with Rewards suitable to its Nature, vast in themselves, and immortal in their Duration, must be not only a mighty Support and Incentive to the Practice of *Virtue*, but a strong Barrier against *Vice*. The Thoughts

Thoughts of an Almighty Judge and of an impartial future Reckoning, are often alarming, inexpressibly so, even to the stoutest Offenders. On the other hand, how supporting must it be to the good Man, to think that he acts under the Eye of his Friend, as well as Judge ! How improving, to consider the *present State* as connected with a *future* one, and every Relation in which he stands as a *School of Discipline* for his *Affections*, every *Trial* as the *Exercise* of some *Virtue*, and the virtuous Deeds which result from both, as introductory to higher Scenes of *Action* and *Enjoyment* ! Finally, how transporting is it to view *Death* as his *Discharge* from the *Warfare of Mortality*, and a triumphant *Entry* into a State of Freedom, Security and Perfection, in which Knowledge and Wisdom shall break upon him from every Quarter ; where each Faculty shall have its proper Object, and his Virtue, which was often damped or defeated here, shall be enthroned in undisturbed and eternal Empire !

On reviewing this short *System of Morals*, and the *Motives* which support and enforce it, and comparing both with the CHRISTIAN Scheme, what *Light* and *Vigour* do they borrow from thence ! How clearly and fully does CHRISTIANITY lay open the *Connections* of our Nature, both *material* and *immaterial*, and *future* as well as *present* ! What an ample and beautiful Detail does it present of the *Duties* we owe to *God*, to *Society* and *Ourselves*, promulgated in the most simple, intelligible, and popular manner ; divested of every Partiality of Sect or Nation ; and adapted to the general State of Mankind ! With what bright and alluring *Examples* does it illustrate and recommend the Practice of those Duties ; and with what mighty *Sanctions* does it enforce that Practice ! How strongly does it describe the *Corruptions* of our Nature ; the *Deviations* of our Life, from the *Rule of Duty* ; and the *Causes* of both ! How marvellous and benevolent a Plan of *Redemption* does it unfold, by which those *Corruptions* may be remedied, and our *Nature* restored from its *Deviations*, to transcendent Heights of *Virtue* and *Piety* ! Finally, what a fair and comprehensive Prospect does it give us of the *Administration* of *God*, of which it represents the *present State* only as a *small Period* ; and a *Period of Warfare and Trial* ! How solemn and unbounded are the Scenes which it opens beyond it ; the *Resurrection* of the *Dead* ; the *General Judgment* ; the *Equal Distribution* of *Rewards* and *Punishments* to the *Good* and the *Bad* ; and the full *Completion* of *Divine Wisdom* and *Goodness*

Advantages of the Christian Scheme, and its Connection with Natural Religion or Morality.

in the *final Establishment of Order, Perfection and Happiness!*
 — How glorious then is that SCHEME of RELIGION, and
 how worthy of *Affection* as well as of *Admiration*, which, by
 making such *Discoveries*, and affording such *Assistances*, has
 disclosed the unfading Fruits and Triumphs of VIRTUE, and
 secured its Interests beyond the Power of TIME and CHANCE!

CONCLUSION.

*Recapitula-
tion.*

WE have now considered the CONSTITUTION and CONNECTIONS of MAN, and deduced the several DUTIES resulting from *both*. We have investigated some of the METHODS by which his *Constitution* may be *preserved* in a *sound and healthful State*, or *restored* to it. We have enquired into the FINAL CAUSES of his *Constitution*, and found its admirable *Harmony* with his *Situation*. And, lastly, we have enumerated the principal MOTIVES which enforce the *Practice* of the *Duties*, incumbent on a Creature *so constituted, and so situated*. From this Deduction *Result*. it appears, that “MAN is a *Creature*, endued with
 “ a Variety of *Senses, Powers, and Passions*, subject to a Va-
 “ riety of *Wants and Dangers*, environed with many NATU-
 “ RAL, and capable of forming many CIVIL *Connections*;
 “ bound to many *Duties* in consequence of such a *Nature*,
 “ such a *Situation*, and such *Connections*, and susceptible of ma-
 “ ny *Enjoyments* in the Discharge of them.” — It farther ap-
 “ pears, that “the Sum of those *Duties* may be reduced to such
 “ a Conduct of his *Senses, Powers and Passions*, as is duly pro-
 “ portioned to his *Wants*, to his *Dangers*, and to his *Connections*;
 “ —that this *Conduct* is most approved in the mean time, and
 “ yields the most refined and lasting *Pleasures* afterwards;—
 “ that particularly, the Exercise of the *Public Affections* is at-
 “ tended with *Enjoyments*, the greatest in DIGNITY and Du-
 “ ration;—and in the *largest Sum* of such *Pleasures* and *Enjoy-*
 “ *ments* his highest HAPPINESS consists. THEREFORE, to
 “ keep those refined Sources of Enjoyment always open, and,
 “ in cases of Competition, to sacrifice the *Lower kinds*, *i. e.*
 “ those of *Sense and Appetite*, to the *Higher*, *i. e.* to those of
 “ *Reason, of Virtue and Piety*, is not real *Self-denial*, but the
 “ truest *Wisdom*, and the justest *Estimate* of *Happiness*.—And
 “ to shut up the nobler Springs, or to sacrifice the *higher* to the
 “ *lower kinds*, is not *Self-indulgence*, but the *Height of Folly*,
 “ and a wrong *Calculation* of *Happiness*.”

There-

Moral PHILOSOPHY. 379

Therefore HE who in his YOUTH, improves his *Intellectual Powers* in the Search of Truth and useful Knowledge; and refines and strengthens his *Moral* and *Active Powers*, by the Love of Virtue, for the Service of his Friends, his Country, and Mankind; who is animated by true Glory, exalted by sacred Friendship for *Social*, and softened by virtuous Love for *Domestic* Life; who lays his Heart open to every other mild and generous Affection, and who, to all these adds a sober masculine *Piety*, equally remote from *Superstition* and *Enthusiasm*, that MAN enjoys the most agreeable *Youth*; and lays in the richest Fund for the honourable *Action*, and happy Enjoyment of the succeeding Periods of Life.

The happiest Youth.

He who, in MANHOOD, keeps the *Defensive* and *Private Passions* under the wisest Restraint; who forms the most select and virtuous Friendships; who seeks after *Fame, Wealth, and Power*, in the Road of *Truth and Virtue*, and, if he cannot find them in that Road, generously despises them; who, in his *private* Character and Connections, gives fullest Scope to the tender and manly Passions, and in his *public* Character and Connections serves his Country and Mankind, in the most upright and disinterested manner; who, in fine, enjoys the *Goods* of Life with the greatest *Moderation*, bears its *Ills* with the greatest *Fortitude*; and in those various Circumstances of *Duty* and *Trial* maintains and expresses an habitual *Reverence* and *Love of God*; THAT MAN is the *worthiest* Character in *this Stage* of Life; passes through it with the highest Satisfaction and Dignity; and paves the Way to the most easy and honourable *Old-age*.

The happiest Manhood.

Finally, HE who, in the DECLINE OF LIFE preserves himself most exempt from the Chagrins incident to that Period; cherishes the most *equal* and *kind Affections*; uses his *Experience, Wisdom, and Authority* in the most *fatherly* and *venerable* manner; acts under a *Sense* of the *Inspection*, and with a View to the *Approbation* of his *Maker*; is daily aspiring after Immortality, and ripening apace for it; and having sustained his Part with Integrity and Consistency to the last, quits the Stage with a modest and graceful Triumph; THIS is the *best*, this is the *happiest* OLD-MAN.

The happiest Old-age.

Therefore that *whole Life* of *Youth, Manhood, and Old-age* which is spent after this manner, is the BEST and HAPPIEST LIFE.

The happiest Life.

“He, who has the strongest *Original Propension* to such Sentiments and Dispositions, has the best NATURAL Temper.” “He who culti-

The good Man.

vates,

The Virtuous,

*The Wise, the
Fortunate
Man.*

*A Life ac-
cording to
Nature.*

*Duty, Wis-
dom and
Happiness
are one.*

*The Sum and
Perfection of
Virtue.*

*A noble and
joyful Corol-
lar.*

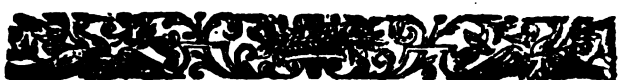
“vates them with the greatest Care is the most VIRTUOUS Character.” “HE, who *knows* to indulge them in the most discreet and *con-* sistent manner, is the WISEST.” “And HE, who, with the *largest Capacities*, has the *best Opportunities* of indulging them, is the most FORTUNATE.

“To form our Life upon this Plan is to FOLLOW NATURE,” that is to say, “to act in a Conformity to our *Original Constitution*, and in a Subordination to the *Eternal Order of Things*.”

“And, by acting in this manner, (so benevolently are we formed by our common Parent !) we effectually promote and secure our highest Interest.” Thus, at last it appears, (and who would not rejoice in so *Divine a Constitution* ?) that “DUTY, WISDOM, and HAPPINESS coincide, and are one.”

To conclude: “VIRTUE is the highest Exercise and Improvement of REASON; the Integrity, the Harmony, and just Balance of AFFECTION; the Health, Strength and Beauty of the MIND.” The PERFECTION of Virtue is to give REASON free Scope; to obey the Authority of CONSCIENCE with Alacrity; to exercise the *defensive Passions* with FORTITUDE; the Private with TEMPERANCE; the Public with JUSTICE; and all of them with PRUDENCE; that is, in a due Proportion to each other, and an entire Subserviency to a calm diffusive BENEVOLENCE;—to adore and love GOD with a disinterested and unrivalled AFFECTION; and to acquiesce in his Providence with a joyful Resignation.” Every Approach to this Standard is an Approach to Perfection and HAPPINESS. And every Deviation from it, a Deviation to VICE and MISERY.”

From this whole REVIEW of HUMAN NATURE, the most divine and joyful of all Truths breaks upon us with full Evidence and Lustre; “That MAN is liberally provided with *Senses* and *Capacities* for enjoying Happiness; furnished with *Means* for attaining it; taught by his NATURE where it lies; prompted by his PASSIONS within, and his CONDITION without, powerfully to seek it; and, by the wise and benevolent ORDER of Heaven, often conducted to the WELFARE of the PARTICULAR, and always made subservient to the GOOD of the UNIVERSAL SYSTEM.”



PART X.

ON

Trade and Commerce.





ON
T R A D E
AND
C O M M E R C E.

C H A P. I.

The Nature and Origin of Trade ; how it is the Basis of Civil Society, the great Support of Arts and Sciences, the true Foundation of Liberty, the Parent of Industry and Elegance, and essentially necessary to National Happiness.

IT was an old Notion of the *Stoicks*, revived and most elegantly explained by the celebrated *Fenelon*, in his *Telemachus*, that the human Species are, in the Eye of their Author and Creator, a single Republic, in which all Nations, great and small, are by him regarded as so many Tribes or Families ; some of which are in a better, some in a worse Condition, from the right or wrong Use of the Means which he has put into their Hands, as intending the Happiness of all his Creatures. It is by these Means, that his all-wise Providence, which directs every thing for the best, draws Good out of Evil, and makes absolute Want the Spring and Cause of over-flowing Abundance.

The

384 TRADE and COMMERCE.

The Nature of Man, as it gives him a strong Feeling of Indigence, so it affords him also the Lights necessary to avoid it; and hence arose the first Notions of Traffic. For when it was perceived, that one Family could not live so well without the Assistance of another, they even in the earliest Ages began, by mutually imparting the Produce of their Labours, to provide for their common Happiness; and this gave a beginning to *Trade*, in the easy and natural way of *Barter*. Those who addicted themselves to Husbandry, were careful to raise, not only what was sufficient for their own Subsistence, but also what might enable them by Exchange to purchase a Part of the Herds and Flocks of their Neighbours, who applied themselves to a pastoral Life: As these again, found their Account in procuring Corn and Fruits, for what would otherwise have proved an over-stock of Sheep and Cattle.

By degrees, as Improvements were made, and Reason exerted itself in adding daily to the Conveniencies of Life, Trade also began to wear quite another Face. Instead of going from House to House, to settle these necessary Exchanges, common Places of Meeting were appointed, and thus *Markets* were introduced. At first bare *Commodities* were exchanged, a Sheep was given for a Sack of Corn; or a certain Number of Fowl, for a Quantity of Fruit; and this made *Weights* and *Measures* necessary. After the Inventions of Spinning and Weaving came to be practised, not only *Wares*, but *Manufactures* were brought to Market; and thus a Variety was introduced in Dealing, and that became an *Art*, which was before but the mere Dictate of Necessity.

One of the first, and indeed one of the most material Discoveries, that was made in this new Art, and which appears to have been made very early, was the Necessity of a *common Measure*, or *Standard*, for regulating the Value of all kinds of Commodities and Manufactures. It was found inconvenient to carry some things to Market, and besides, Markets were attended with great Incertainties: Those who had Goods to exchange, were not always able to find such as had the Things they wanted; and perhaps when they were found, they had no Occasion for the Things offered. To free themselves from these Difficulties, Men were obliged to fix upon somewhat, that should be esteemed in just Proportions, an Equivalent for Commodities, or Manufactures, of any kind; and this was the Rise of *Money*. There was no Necessity of its having any intrinsic Value, for it was sufficient that common Consent gave it that kind of Course

TRADE and COMMERCE. 385

from hand to hand, which is so well expressed by our common Term *Currency*; and if it was lasting, portable, and of an unalterable Nature, it was enough. In some Parts of the World, they formerly used *Leather Money*; on the Coasts of *Africa*, those little white speckled and shining Shells, which the Natives call *Cowries*, and our Children here *Black-a-moors Teeth*, still pass for Money, and have a certain Value assigned. In Process of Time, as this Art came to be farther improved, *Silver* grew into Value with most Nations, and became what it is at present, the *common Measure* of all Things.

By this Method, all the Inconveniencies before-mentioned, and many more that for the sake of Brevity were omitted, totally disappeared. Instead of purchasing Cattle with Corn, or Wine with Manufactures, both were purchased with Silver. When Commodities were scarce more Silver was given for them; when they came in plenty to Market, they fetched less; and hence the Terms of *Dearness* and *Cheapness*. The reason why Silver, became almost universally the *Standard*, was from its Neatness, Solidity, and lying in a narrow Compass. At first the Value of it was adjusted by Weight, and afterwards, to increase and improve its Currency, that Weight came to be settled by a Stamp or Mark, and hence came what we call *Coin*. It is easy from this Account to discern the Reason, why in many Countries the Denominations of Money are taken from Weights. Amongst the *Hebrews*, for Example, the *Shekel* was both a Weight and a Coin; that is to say, when the Piece called the *Shekel* came to have a Stamp, that Stamp imported, that the Silver upon which it was impressed weighed a *Shekel*. So in *England*, the *Pound* and the *Mark* were both Weights and Sums, because originally a Pound of Money was a Pound in Silver, and a Mark was two Thirds of a Pound both in Money and in Weight: Things indeed are since changed, for a Pound of Silver makes now three Pounds in Money, but the Denomination of *Pound* and *Mark*, which still remain, occasion no Confusion, because the Pound and Mark in Money retain still their old Proportion, that is to say, the latter is two Thirds of the former. In *North Britain* the same Proportion holds, though their Money has suffered a much greater Degradation, their Pound being no more than Twenty Pence of our Money, and their Mark two Thirds of that Pound.

It is also to be observed that Silver passed by Weight, all Civil Societies were reduced into perfect Order, that is to
 VOL. II. C c say,

386 *TRADE and COMMERCE.*

say, till Governments were settled; for without the Sanction of Civil Authority, that kind of Stamp, which converted Silver into Coin, could not have been had. Hence Coining came to be one of the Prerogatives of supreme Power, or the Privilege of those to whom it was delegated by the supreme Power, the Stamp being an Assurance, that the Piece on which it was impressed was of a certain Value. We see likewise from this Account of the Matter, how *Coining*, or rather *false Coining*, came to be considered as a Species of *Treason*; for the assuming a Power to stamp, and thereby fix in common Estimation the Value of any Piece of Metal, was a plain Usurpation of that Authority to which it legally belonged, and therefore under all Governments might very reasonably pass for *Treason*.

But it is very natural to enquire, since Gold, Copper, and Brads have been also coined, and the same Penalties in some Countries inflicted for the counterfeiting any of these, as for the counterfeiting of Silver, why they ought not to be esteemed *common Measures* as well as Silver, contrary to the Definition before given. In answer to this we must allow, that in common Speech, and in ordinary Practice, they are accounted Money, and yet strictly speaking, there is, indeed there can be but one Standard, and that is Silver. The Stamp upon Gold only settles the Value in Silver for which that Piece of Gold is to pass; for Gold, in itself, is a Commodity, as well as other Things, and its Price varies in different Ages, and in several Countries, and at different Times in the same Country. It may be also enquired how Silver can be considered as a perpetual Standard of the Value of Things, when in this and in other Nations, the very Coin itself is subject to Variation. The Solution of this Difficulty consists in distinguishing between the Impression, and the intrinsic Value, or rather the Rate given by the Impression, and the Weight of the Piece so coined. The Stamp in this Case answers a double Purpose; in the first place it certifies, that the Piece of Silver is of such a Weight and Fineness, of which it belongs to all the World to take notice; and it likewise certifies the Value of the Coin as settled by that Authority which the Stamp discovers; and this relates only to the Subjects of that Government under which the Stamp gives this Money Currency. So far therefore as the Stamp distinguishes the Weight and Fineness of the Silver, it is of universal Credit; and in this Sense only *Silver* is the *common Standard*, which when closely considered, this very Objection proves. For suppose the intrinsic Value of an Ounce of Silver

TRADE and COMMERCE. 387

ver to be five Shillings ; suppose the Crown Piece to weigh exactly an Ounce ; suppose the Government of any Country thinks fit to direct that the Crown Piece shall pass for ten Shillings ; this will only alter the Rate of Silver Coin in that Country, and not the Value of Silver as a Standard ; for all foreign Nations will consider the Stamp no farther than as it fixes the Weight, and will have the same Quantity of Silver for their Goods, as they had before the Alteration of the Value of the Coin in that Country ; that is to say, if they dealt with the Inhabitants for a Pound of Silk at the Rate of twenty Shillings before the Alteration, they will then expect forty Shillings for it, or in other Words, they will still expect four Ounces of Silver for that Pound of Silk, as they did before the Rise of their Coin.

This Point may be farther illustrated, by considering the Practice in *China*, where they have not even to this Time any Coin, but transact all their Business by weighed Silver. In order to make this easy, every Trader carries in his Pocket a Roll of Silver, which is very fine, and of this they cut off with a Pair of Sheers, which they likewise carry about them, as much as will pay for the Goods they buy by Weight. For the Convenience of making larger Payments, they also carry a Roll of Gold, which they cut in like manner, and frequent Practice has given them such a Dexterity in doing this, that they very rarely miss cutting at once the Quantity they are to pay. But tho' they have not Coin, yet the Fineness of the Silver is regulated, and from thence is filed the *Chan's* Silver, because it is of the Standard required by the *Chan*, or Emperor of *China*, in the Payments that are made to his Exchequer ; and this is also manifest to every body by the Cutting ; for if they were to debase it, their Sheers would not divide it ; or if they did, the Silver would not cut even, but would appear in Cracks and Gaps, and thereby prove its Baseness. They have indeed a sort of Copper Coin, of a very small Value, with a Hole thro' the Middle, for the greater Convenience of stringing them in certain Numbers ; but these rise and fall in their Value almost every Week, according as there is a greater or a less Demand for them ; but the Value of the *Chan's* Silver is permanent, and is the fixed and settled Standard of their Trade.

We have now shewn as clearly and succinctly as possible, what are the three great Heads of mercantile Intercourse, viz. *Commodities*, *Manufactures*, and *Money* ; as also how the latter serves so commodiously for settling the Value or

388 *TRADE and COMMERCE.*

Price of the other two, and serves such as are possessed of it in Countries where Traffic has a free Course, instead of both. For he who has Money by him may have all Things, and may purchase at any Market whatever Goods and Manufactures he pleases ; because the Person who receives it may apply it to the like Use, and procure whatever suits him best ; so that the Establishment of this Standard or common Measure, appears to be a very great Help to Trade. Yet this is not the only Use of Money ; it serves also to compensate Labour, to purchase Houses and Lands, in short, to acquire every thing ; and hence arises the Notion of *Riches*, which consist in the Possession of Money, or of what may be easily and certainly converted into it.

But because in common Acceptation, Gold and Silver pass universally, and are esteemed in all Countries for the only stable and certain kind of Wealth ; so in Countries where these are not deposited by Nature, the Inhabitants must remain perpetually indigent and poor, if they had not some Method of acquiring these valuable Metals. This Method is no other than such an Intercourse between Nations, as we have described under the Name of *Trade* amongst People of the same Country ; but when carried into so large Extent, it is usually, or at least properly styled *Commerce*. In order to this, not only Commodities, Manufactures, and Money, but *Shipping* also is necessary ; and by the Help of these, those Nations that have applied themselves to this Art, have in all Ages rendered themselves rich, powerful, and happy, and all this, notwithstanding any Difficulties they might labour under in point of Climate, Soil, or Situation. For tho' with the Help of Advantages in all or several of these Articles, they might thrive sooner or better ; yet Industry and Application has very frequently enabled them to get over what might seem unsurmountable Obstacles in their Way to the Points that they proposed, as the Reader will see with Satisfaction, in the following short History of Commerce.

Yet before we examine this by the Light of Experience, it will be highly proper to consider, how far Reason will carry us in the Elucidation of this Subject. We must easily discern, that nothing could be so great a Spur to Industry as the Invention of *Trade*. The Variety of Wants to which Man in a solitary State stands exposed, is fitter to oppress and weigh down his Spirit, than to excite him to Industry ; but when he perceives that a reasonable Proportion of Care, and Diligence, and Labour, will enable him to acquire not the bare Necessaries only, but the Conveniencies also of Life ;

TRADE and COMMERCE. 389

this gives him Courage, Vigour and Activity, which could be deduced from nothing else. At the same time it quickens and enlivens his Imagination, puts him upon new Inventions, upon carrying Arts already known to the utmost Perfection, or upon striking out new; and considered in this Light, is the *great Principle of Science*, Theoretical and Practical. The former is valuable only as it leads to the latter, and the latter would be a Thing of little or no Importance if it were not for TRADE, which gives that Encouragement upon which *all Arts* subsist, even those that seem the most removed from it.

As the Necessities of Mankind created an Intercourse of Buying and Selling, so this soon introduced first *Civility*, and then *Society*. In his own Family, in the primitive Times, every Man was a *Lord* and a *Prince*; his Will was a Law to those about him, and he would probably have spoke only the Language of Power, if the *Business* of *Bartering* with his Neighbours had not led him amongst his *Equals*, where consequently that Language could not be understood. A just Sense of this brought the Forms of Dealing, and the true Spirit of Commerce into Use; and when this had so far improved Men's Circumstances, that they were not only possessed of valuable Things, but had a Concern for the Preservation of them, it was natural to think of providing for this by *political Constitutions*. Despotic Governments might be the Effects of Chance, of Accident, or of Misfortune; but equal, limited, and legal Governments, could only arise from Men's being possessed of PROPERTY, and from their Desire of keeping and enjoying that *Property* they possessed.

This Principle of living under *Laws* for the Sake of the Advantages derived from them, and of disdaining any other *Subjection* than that proceeding from a well-conditioned and rational Choice, is what is truly, strictly, and properly styled LIBERTY, and is not only highly consistent with, but in some measure essentially necessary to *Trade*. Men may be forced to labour whether they will or not, and Men may be chained as Slaves to their Oars in a Galley against their Wills; but that Sort of Labour, and that Sort of Hazard which Trade requires to make it flourish, is out of the Reach of Force; and therefore, as we shall see in the next Chapter, the Countries most famous for *Commerce* have been usually under a *Republican Government*, or, which comes to the same Thing, *Princes* have been forced to relax the natural Severity of their Administration, in order to encourage their Subjects to apply them-

390 TRADE and COMMERCE.

themselves to *Commerce*, to bring *Trade* into their *Dominions*, and to *keep* it when brought.

Great as these Benefits are, yet there is still another which in the Judgment of *Politicians* will perhaps weigh down all the rest, and seem in itself sufficient to recommend *Commerce* beyond all other Acquisitions. This mighty Benefit is Power, and that kind of Power which of all others is the most desirable, the Power, or if you will, the *Ability* of *Independency*. It is an ancient and a just Maxim, that whoever prevails at *Sea*, will in the End prevail on *Shore*; nor is there any Instance, or at least not above *one*, of a Maritime Power ruined by a Land War, till her Power was first broken by *Sea*, or in other Words, till she had lost the *Power* of the *Sea*. It appears from hence, that if Liberty, Property, an equal Government, a flourishing State of Learning, Perfection in Arts and Sciences, public Magnificence, and private Abundance, together with the Capacity of preserving and defending these against all *Invaders*, be certain and incontestable Blessings, they are such as COMMERCE can, perhaps such as nothing but COMMERCE can bestow. And therefore what we have advanced in the Title of this Chapter, is not an airy or imaginary Compliment to the *Prerogative* of our *own Island*. as at first sight it might very well be taken to be, but a serious and a sober Truth, which when fully explained, the Mind receives and embraces, as she does most other Truths, with Readiness and Pleasure, and on which the more we reflect, the more we consider and meditate, the more we shall be satisfied, that the Worth of the Thing is not over-rated, but that it has been fairly and plainly represented.

It may be objected, and indeed it has been very often objected, that together with greater Benefits and Blessings, there are also many Inconveniencies and destructive Qualities that attend a flourishing and extensive Commerce; such as Luxury, Contempt of Virtue, and in Time a total Depravity of Manners. That the best Things may be corrupted, and that when corrupted they become the worst, is a Thing that cannot be denied; and yet this is no Argument, that the best Things are not desirable. Idleness and Luxury are indeed the Children of Abundance, as Abundance is the Daughter of Trade; but surely it is hard to make Industry and Trade, the honest and innocent Parents of this beautiful Dame, accountable for any Slips she may make. It is not TRADE therefore, that ever becomes either dangerous or injurious to any State, but Errors in Government corrupt and poison the

TRADE and COMMERCE. 391

the Advantages that arise from thence; and therefore upon such as are guilty of these Errors, the Blame ought to fall, and not upon COMMERCE, which never can be the Cause. As the clearest Proof of this, let us consider, that where *Idleness* and *Luxury* prevail *Commerce* must quickly sink; and therefore it is idle as well as unjust to suppose, that she has any *Connection* with those in whose Company it is impossible for her to remain.

C H A P. II.

A succinct History of Commerce, from the earliest Times to the present; containing a clear, tho' concise Account, of what chiefly deserves Notice, in reference to the Nations most remarkably distinguished by it, from the Arabians, Egyptians, Phœnicians, &c. down to the Establishment of the principal Maritime Powers in Europe.

THE shortest, the easiest, and the most agreeable Method of becoming acquainted with the true Nature, and real Importance of Commerce, is to take a succinct View of its History, by which it will appear, that in every Nation successively where it has been thoroughly cultivated, and came to a high Degree of Perfection, it has been constantly attended with those Consequences which have been ascribed to it in the former Chapter. Adding therefore to the Arguments delivered therein, from Reason and the Nature of Things, the Proofs that arise from Experience, and which will appear in the Progress of this Discourse, there will be no room for Scepticism left; but we must be as fully and clearly persuaded of the Truths laid down in reference to this Point, as it is possible for us to be in relation to a Thing of this Nature; because we have every Motive to Conviction that can be either expected or desired.

It is a Point as yet undecided by the Learned, to what Nation the Invention and first Use of COMMERCE belonged; some attribute it to one People, some to another, for Reasons that are too long to be discussed here. But after mature Reflection, I must confess it seems most probable to me, that the Inhabitants of *Arabia* were those that first made long Voyages. It must be allowed, that no Country was so happily seated for this Purpose, as that which they inhabited,

392 TRADE and COMMERCE.

being a Peninsula, washed on three Sides by three famous Seas, the *Arabian*, *Indian*, and *Persian*. It is also certain, that it was very early inhabited; and the first Notice we have of any considerable Trade refers it to the *Ishmaelites*, who were settled in the hither Part of *Arabia*. To them *Joseph* was sold by his Brethren, when they were going down with their Camels to *Egypt* with *Spicery*, *Balm*, and *Myrrh*. It may seem strange to infer from hence, that Commerce was already practised by this Nation, since Mention is here made of Camels or a Caravan, which certainly implies an inland Trade; and it must be likewise allowed, that *Balm* and *Myrrh* were the Commodities of their Country. But whence had they the *Spicery*? Or how came *Arabia* to be so famous in ancient Times for *Spices*? Or whence proceeded that Mistake of many great Authors of Antiquity, that *Spices* actually grew there? Most certainly, because these People dealt in them; and that they dealt in them the first of any Nation that we know of, appears from this very Instance. *Strabo*, and many other good Authors assure us, that in succeeding Times they were very great Traders; they tell us particularly what Ports they had, what prodigious Magazines they kept of the richest kinds of Goods; what wonderful Wealth they obtained; in what prodigious Magnificence they lived, and into what Excesses they fell in respect to their Expences for Carving, Building, and Statues. All this shews that they were very great Traders; and it also shews, that they traded to the *East-Indies*, for from thence only they could have their *Spices*, their rich *Gums*, their *sweet-scented Woods*, and their *Ivory*, all which it is expressly said, that they had in the greatest Abundance. This therefore proves, that they had an extensive and flourishing Commerce; and that they had it earlier than any other Nation, seems to me evident, from their dealing at that Time in *Spices*. Besides, there is much less Difficulty in supposing, that they first discover'd the Route to the *Indies*, than if we ascribe that Discovery to any other Nation; for in the first place, they lay nearest, and in the next, they lay most conveniently; to which we may add thirdly, that as the Situation of their Country naturally inclined them to Navigation, so by the Help of the *Monsoons*, they might make regular Voyages to and from the *Indies* with great Facility; nor is it at all unlikely, that this Discovery might be at first owing to Chance, and to some of their Vessels being blown by a strong Gale to the opposite Coast, from whence they might take the Courage to return, by observing the Regularity of the Winds at certain Seasons. All these Reasons
taken

TRADE and COMMERCE. 393

taken together, seem to favour this Opinion, that Commerce flourished first among them; and as to its Consequences in making them rich and happy, there is no Dispute about them.

We find in the Records of Antiquity, no Nation celebrated more early for carrying all Arts to Perfection than the Inhabitants of *Egypt*; and it is certain also, that no Art was there cultivated more early, with more Assiduity, or with greater Success than Trade. It appears from the foregoing Instance, that the richest Commodities were carried thither by Land; and it is no less certain, that the most valuable Manufactures were invented and brought to Perfection there, many Ages before they were thought of in other Countries. For as the learned Mr. *Warburton* very justly observes, at the Time that *Joseph* came into *Egypt*, the People were not only possessed of all the Conveniencies of Life, but were remarkable also for their Magnificence, their Politeness, and even for their Luxury; which argues, that Traffic had been of long standing amongst them. To say the Truth, the great Advantages derived from their Country's lying along the *Red-Sea*, and the many Benefits that accrued to them from the *NILE*, which they very emphatically called *the River*, or the *River of Egypt*, and of which they knew how to make all the Uses that can be imagined, gave them an Opportunity of carrying their inland Trade, not only to a greater Height than in any Country at that Time, but even higher than it has been carried any where, *China* only excepted; and some People have thought it no trivial Argument to prove the Descent of the *Chinese* from the *Egyptians* that they have exactly the same Sort of Genius, and with wonderful Industry and Care have drawn so many Cuts and Canals, that their Country is almost in every Part of it navigable. It was by such Methods, by a wise and well-regulated Government, and by promoting a Spirit of Industry amongst the People, that the ancient *Egyptians* became so numerous, so rich, so powerful; and that their Country for large Cities, magnificent Structures, and perpetual Abundance, became the Glory and Wonder of the old World.

The *Phœnicians*, tho' they possessed only a narrow Slip of the Coast of *Asia*, and were surrounded by Nations so powerful and so warlike, that they were never able to extend themselves on that Side, became famous, by erecting the first naval Power that makes any Figure in History, and for the raising of which they took the most prudent and effectual Measures. In order to this, they not only availed themselves

394 TRADE and COMMERCE.

of all the Creeks, Harbours and Ports, which Nature had bestowed very liberally on their narrow Territory, but improved them in such a manner, that they were no less remarkable for their Strength, than considerable for their Convenience; and so attentive they were to whatever might contribute to the Increase of their Power, that they were not more admired for the *vast Advantages* they derived from their *Commerce*, than they were *formidable* by their *Fleets* and *Armies*. They were likewise celebrated by Antiquity as the Inventors of *Arithmetic* and *Astronomy*, and in the last mentioned Science, they must have been very considerable Proficients, since they had the Courage to undertake long Voyages at a Time when no other Nation (the *Arabians* and *Egyptians* excepted) durst venture farther than their own Coasts. By these Arts TYRE and SIDON became the most famous Ports in the Universe, and were resorted to by all their Neighbours, and even by People at a considerable Distance, as the great Storehouses of the World. We learn from the Scriptures, how advantageous their Friendship and Alliance became to the two great Kings of *Israel*, *David* and *Solomon*; and we see by the Application of the latter for Architects and Artists to *Hiram* King of *Tyre*, to what a prodigious Height they had carried Manufactures of every kind.

It is very certain, that SOLOMON made use of their Assistance in equipping his Fleets at *Elath* and *Ezion Geber*; and it is very probable that they put him upon acquiring those Ports, and gave him the first Hints of the amazing Advantages that might be derived from the Possession of them, and from the Commerce he might from thence be able to carry on. These Ports were most commodiously situated on the *Arabian Gulph*, and from thence his Vessels, manned chiefly by *Phœnicians*, sailed to *Ophir* and *Tharshis*, wherever those Places were. Some Writers will needs have them to be *Mexico* and *Peru*, which is certainly a wild and extravagant Supposition; others believe that we are to look for *Ophir* on the Coast of *Africa*, and *Tharshis* in *Spain*; but the most probable Opinion is, that they were both seated in the *East-Indies*. By this adventurous Navigation, he brought into his Country Curiosities not only unseen, but unheard of before, and Riches in such Abundance, that, as the Scripture finely expresses it, *He made Silver in Jerusalem as Stones, and Cedar-Trees as Sycamores that grew in the Plains*. The Metaphor is very bold and emphatical; but when we consider that it is recorded in this History, that the Return of one Voyage only to *Ophir*, produced *four hundred and fifty Talents of Gold*,

TRADE and COMMERCE. 395

Gold, which make fifty-one thousand three hundred twenty eight Pounds of our *Troy* Weight, we cannot doubt of the immense Profit that accrued from this Commerce. It is also observable, that the Queen of *Sheba*, or *Saba*, which lies in that Part of *Arabia* before-mentioned, surprized at the Reports that were spread of the Magnificence of this Prince, made a Journey to his Court on purpose to satisfy herself, whether Fame had not exaggerated the Fact; and from the Presents she made him of one hundred and twenty Talents of *Gold*, of *Spices* in great Abundance, and *precious Stones*, we may discern the true Reason of her Curiosity, which proceeded from an Opinion that no Country could be *so rich* as her *own*; and there is another Circumstance very remarkable, and which seems strongly to fortify what we have advanced in the Beginning of this Chapter, it is added, *neither was there any such Spices as the Queen of SHEBA gave to King SOLOMON*; which seems to intimate, that the *Arabians* had penetrated farther into the *Indies*, than even the Fleets of this famous Prince, and brought from thence other Spices (perhaps Nutmegs and Cloves) than had ever been seen before. It was by his Wisdom, and by his steady Application to the Arts of Peace, all of which mutually support each other, as they are all driven on by the Wheel of Commerce, which supplies every Want, and converts every Superfluity into Merchandize; that this Monarch raised his Subjects to a Condition much superior to that of any of their Neighbours, and rendered the Land of *Israel* while he governed it, the Glory and Wonder of the *East*. He made great Acquisitions without making Wars; and his Successor, by making Wars, lost those Acquisitions. It was his Policy to keep all his People employed, and by employing them, he provided equally for the Extension of their Happiness, and his own Power; but the following Kings pursued other Measures, and other Consequences attended them. The Trade of *Judea* sunk almost as suddenly as it rose, and in Process of Time they lost those Ports on the *Red-Sea*, upon which their *Indian* Commerce depended.

The whole Trade of the Universe became then, as it were, the Patrimony of the *Phœnicians* and the *Egyptians*. The latter monopolized that of the *Indies*, and together with her Corn and Manufactures, brought such a prodigious Balance of Wealth continually into the Country, as enabled the ancient Monarchs of *Egypt* to compass all those memorable Works, that in spite of Time and barbarous Conquerors, remain the Monuments of their Wisdom and Power, and are like to remain so as long as the World subsists. The *Phœnicians* drew
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396 *TRADE and COMMERCE.*

from *Egypt* a great Part of those rich Commodities and valuable Manufactures, which they exported into all the Countries between their own and the *Mediterranean Sea*; they drew likewise a vast Resort to their own Cities, even from Countries at a great Distance; and we need only look into the Prophets *Isaiah* and *Ezekiel* in order to be convinced, that these Governments founded on Trade, were infinitely more glorious, and more stable, than those that were erected by Force. All this we find likewise confirmed by profane Histories; and by comparing these it is evident, that the Industry of the Inhabitants of this small Country triumphed over all Obstacles, procured the greatest Plenty in a barren Soil, and immense Riches, where, without Industry, there must have been the greatest Indigence. It is true, that old *Tyre* was destroyed by *Nebuchadnezzar*, but not till she had flourished for Ages; and even then she fell with Dignity, and after a Resistance that ruined the Army of the Great Conqueror of *Asia*. Out of the Ashes of this proud City, the great Spirit of its Inhabitants produced a Phoenix, little, if at all, inferior in Beauty to its Parent. New *Tyre* was situated on an Island, and though her Bounds were very narrow, yet she became quickly the Mistress of the Sea, and held that supreme Dominion till subdued by *Alexander the Great*, whom no Power could resist. The Struggle she made, however, though unsuccessful, was great, and very much to the Honour of her Inhabitants: It must be owned, that the *Greek* Hero found it more difficult to master this single Place, than to overcome the whole Power of *Persia*.

The Views of the *Macedonian* Prince were beyond Comparison more extensive than his Conquests; and whoever considers *Alexander's* Plan of Power, and enters into it thoroughly, will think him more a Politician than he was a Conqueror. He framed in his own Mind an Idea of universal Monarchy, which it was indeed impossible to accomplish; but the very Notion of it, does him far greater Honour than all his Victories. He thought of placing his Capital in *Arabia*; and of disposing Things in such a manner, as to have commanded the most remote Parts of the *Indies*, at the same time that he maintained a Connection with the most distant Countries in *Europe*. He was for making use of Force to acquire; but he very well knew that Commerce only could preserve an Empire, that was to have no other Limits than those which Nature had assigned the World. He desired to be Master of all; but at the same time he was willing to be a wise and gracious Master, and to place his Happiness in that of his People,

TRADE and COMMERCE. 397

People, or rather, in making all the Nations of the Earth but one People. A vast, an extravagant, an impracticable Scheme it was, of which he lived not long enough to draw the Outlines; but the Sample he left in his new City of *Alexandria* sufficiently shews, how just, and how correct his Notions were, and how true a Judgment he had formed of what might be effected by those Methods upon which he depended. That City, which he might be said to design with his own Hand, and which was built, as it were, under his Eye, became in succeeding Times all that he expected, the Glory of *Egypt*, and the Center of Commerce for several Ages.

While TYRE was in the Height of her Glory, and had no Rival in the Empire of the Sea, she founded her noble Colony of CARTHAGE on the Coast of *Africa*. The Situation of this City was every way admirable; whether considered in the light of a Capital, of a strong Fortress, or of a commodious Port. It was equally distant from all the Extremities of the *Mediterranean Sea*, had a very fine Country behind it, and was not in the Neighbourhood of any Power capable of restraining its Commerce, or its Growth. It is almost inexpressible how soon its Inhabitants became, not only numerous and wealthy, but potent and formidable. By degrees they extended themselves on all Sides, conquered the best Part of *Spain*, and erected there a new *Carthage*; the Islands of *Sicily* and *Sardinia*, or at least the best Part of them, submitted likewise to their Yoke. But their Conquests, however, were inconsiderable in Extent, when compared with their Navigation. On one Side they stretched as far Westward as *Britain*; and the *Scilly* Islands, which are now so inconsiderable, were to them an *Indies*, the Route to which, they used the utmost Industry to conceal. On the other hand, they discovered a great Part of the Coast of *Africa*, the *Canary* Islands; and some there are, who believe they first found the way to *America*. While they confined themselves to Trade, and the Arts which belonged thereto, their Power was continually increasing; but when Industry gave way to Luxury, and a Spirit of Ambition banished their old Maxims of Frugality and Labour, their Acquisitions remained at a Stand. The *Romans* began to grow jealous of their Naval Power, which it cost them two obstinate Wars of forty Years Continuance to humble. When she was at length destroyed, her very Ruins were majestic; for at the beginning of the third fatal Punic War, this City contained seven hundred thousand Inhabitants alone, and had three hundred Cities in *Africa* under her Dominion. Such was the
Empire

398 TRADE and COMMERCE.

Empire of *Carthage*, raised intirely by COMMERCE; and to which, if she had been content to have applied herself with the same Steadiness in her highest Prosperity as in her early Beginnings, there is no doubt she had preserved her *Freedom* much longer than she did; for as Thrift and Diligence, and good Faith, are the Pillars of a Commercial State, so when these are once shaken, it is not only natural that she should decline, but unavoidable also. Reason teaches us this, and we are taught it too by the *Example* of CARTHAGE!

The *Ptolemies*, who were the Successors of *Alexander* in *Egypt*, entered deeply into that *Hero's* Scheme, and reaped the Benefit of his wife Establishment. *Ptolemy Philadelphus*, by encouraging Trade, made his Subjects immensely rich, and himself inexpressibly powerful. We are told by an ancient Author, than he had one hundred and twenty Gallies of War of an enormous Size, and upwards of four thousand other Vessels, small and great. This would appear incredible, if other Wonders were not related of him, which seem to explain and confirm these. He raised a new City on the Coast of the *Red-Sea*; he was at an immense Expence in opening Harbours, constructing Quays, in raising Inns at proper Distances on the Road, and in cutting a Canal from Sea to Sea. A Prince who comprehended the Importance of Commerce to a degree that induced him to dare such Expences as these, might have what Treasures, what Armies, what Fleets he pleased. In his Time, ALEXANDRIA appeared in Pomp and Splendor. She owed her Birth to *Alexander*, but it was *Ptolemy*, who caught a double Portion of his Master's Spirit, which raised her to that Magnificence that Ages could not deface. We may guess at what she was in her Glory, by what we are told was the Produce of her Customs, which fell little short of Two Millions of our Money annually; and yet we cannot suppose that *Ptolemy*, who understood Trade so well, would cramp it by high Duties, or extravagant Impositions. When the Revenue of the Prince from a single Port was so great, what must have been the Riches of his Subjects?

But what shews us ALEXANDRIA in the highest Point of Light, is the Credit she maintained after *Egypt* sunk from an Empire into a Province. The *Romans* themselves were struck with the Majesty of her Appearance, and though till then they had little regarded Traffic, yet they were not long before they comprehended the Advantages of such a Port, and such a Mart as *Alexandria*; they confirmed her Privileges, they protected her Inhabitants, they took every Measure possible to preserve her Commerce, and this, with so good
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TRADE and COMMERCE. 399


an Effect, that she actually preserved it longer than *Rome* herself could preserve her Power. She followed, indeed, the Fortune of the Empire, and became at last dependent upon *Constantinople*, when its Founder removed thither the Capital of the Empire; and his Successor found means to transfer also a Part of the Trade of *Alexandria* to the same Place. Yet this City continued still to hold up her Head, and though she sunk under the barbarous Power of the *Arabs*, yet they grew polish'd by degrees; by degrees she recovered somewhat of her ancient Pre-eminence; and though she never rose to any thing like her former Lustre, yet she remained the Center of what little Trade there was in the World; which is more than can be said of almost any Place that has fallen under the *Mohamedan* Power.

When the *Roman* Empire was over-run by *Barbarians*, and Arts and Sciences sunk with that Power which had cultivated and protected them, Commerce also visibly declined, or, to speak with greater Propriety, was overwhelmed and lost; for in times of Confusion, and public Desolation, when the *Giant War* stalks abroad, overturns great Cities, tramples down the noblest Improvements, and lays whole Countries waste, it is impossible that Trade should continue, or rather, it is highly probable, that on the very Approach of these Dangers, she must have already fled. It is a common Saying, that Riches are the *Nerves* of War, rather, I think, the *Food* of it; and therefore where War devours these, Commerce cannot subsist, which is a perpetual Reason why all trading Nations should avoid offensive Wars, for by those that are absolutely defensive, they can never be hurt. But to keep to the Point; when that Irruption of various Nations had driven the *Roman* Policy out of the greatest Part of *Europe*, some straggling People, either forced by Necessity, or led by Inclination, took shelter in a few straggling Islands that lay near the Coast of *Italy*, and which would never have been thought worth inhabiting in a time of Peace. This was in the sixth Century, and at their first fixing there, they had certainly nothing more in View than living in a tolerable State of *Freedom*, and acquiring a Subsistence as well as they could. These Islands being divided from each other by narrow Channels, and those Channels so incumbered by Shallows, that it was impossible for Strangers to navigate them, these Refugees found themselves tolerably safe, and uniting amongst themselves for the sake of improving their Condition, and augmenting their Security, they became in
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400 *TRADE and COMMERCE.*

the eighth Century, a well-settled Government, and assumed the Form of a *Republic*.

Simple and mean as this Relation may appear, yet it is a plain and true Account of the Rise, Progress and Establishment of the famous and potent Republic of *VENICE*. Her Beginnings were indeed weak and slow, but when the Foundation was once well laid, her Growth was quick, and the Increase of her Power amazing. She extended her Commerce on all Sides, and taking Advantage of the barbarous Maxims of the *Mohamedan* Monarchies, she drew to herself the Profits of the *Indian Trade*, and might, in some Sense, be said to make *Egypt* a Province, and the *Saracens* her Subjects. By this means her Traffic swelled beyond Conception, she became the common *Mart* of all Nations; her Naval Power arrived at a prodigious Height, and making use of every favourable Conjunction, she stretched her Conquest, not only over the adjacent *Terra Firma* of *Italy*, but through the Islands of the *Archipelago*, so as to be at once *Mistress* of the *Sea*, of many fair and fruitful Countries, and of Part of the great City of *Constantinople* itself. But Ambition, and the Desire of lording it over her Neighbours, Passions equally fatal in public and in private Life, to States and Empires, as well as to great Men, and to great Families, brought upon her those Evils, which first produced a Decay of Trade, and then a Declension of Power. General Histories indeed ascribe this to the *League of Cambray*, when all the great Powers in *Europe* combined against this Republic; and in truth, from that Period, the Sinking of her Power is truly dated; but the *Venetian* Writers very justly observe, that though this Effect followed the League, yet there was another more latent, but at the same time a more effectual Cause, which was, the falling off of their Commerce. Her Subjects were become less frugal, and less wealthy, and at the same time more ambitious and more profuse. It was impossible in such a Situation, that the State should maintain itself when so warmly attacked; a Man in a Consumption cannot struggle with the same Force as in Health; and though By-standers may attribute the Fall he receives to the Strength of his Adversary, he cannot help knowing that it proceeds solely from the failing of his own Strength. This was the Case of the *Venetians*, and they have ever since been more indebted to their Wisdom than their Power, to the prudent concealing of their own Weakness, and taking Advantage of the Errors of their Enemies, than to any other Cause, for their keeping up that Port which they still bear,



TRADE and COMMERCE. 401

bear, and which had been lost long ago by any other Nation but themselves.

At the same time that *Venice* rose, as it were, out of the *Sea*, another Republic was erected on the *Coast* of *Italy*. There could not well be a worse Situation than the narrow, marshy, unprofitable and unwholsome *Islands* in the *Adriatic*, except the rocky, barren, and inhospitable *Shores* of *Liguria*, and yet as Commerce raised *VENICE* the Rich on the one, so she erected *GENOA* the Proud on the other. In spite of ambitious and warlike Neighbours, in spite of a confined and unproducing Country, and which were still greater Impediments, in spite of perpetual Factions, and successive Revolutions, the Trade of *Genoa* made her Rich and Great. Her Merchants traded to all Countries, and throve, by carrying the Commodities of the one to the other. Her Fleets became formidable; and besides the adjacent Island of *Corfica*, she made larger and important Conquests. She fixed a Colony at *Cassa*, and was for some time in Possession of the Coasts on both Sides of the *Black Sea*. That Emulation which is natural to neighbouring Nations, and that Jealousy which rises from the Pursuit of the same Mistress, Commerce, begat continual Wars between these rival Republics, which after many obstinate and bloody Battles, was at last terminated in Favour of *Venice*, by that famous Victory of *Chiozza*, gained by her Doge *Andrew Contarini*, from which time *Genoa* never pretended to be Mistress of the *Sea*. These Quarrels were fatal to both; but what proved more immediately destructive to the *Genoese*, was their Avarice, which induced them to abandon the fair Profits of Trade, for the Sake of that vile Method of acquiring Wealth by *Usury*.

This leads us to mention another Subject that has a close Connection with Commerce, and that is the Business of EXCHANGES. This, though in many Cases useful to Commerce, concerns also many other things, such as Transactions of State and of War, the Removal of Families, or the Descent of Successions upon Strangers, all of which create the Necessity of removing Money from one Country to another, which sometimes cannot be done at all, and in most Cases must be attended with Inconveniency, if practised in the plain way of Transportation. The *Lombards*, one of the many Nations that established themselves in *Italy*, after the Ruin of the *Roman* Empire, and who have bestowed their Name on one of the finest Countries in it, devised a Method for removing, in a great measure, this Inconvenience; for they observed that Money was very often wanting reciprocally in several Countries, and therefore they imagined,

402 TRADE and COMMERCE.

that if a Way could be found to establish a Correspondence capable of supplying these mutual Wants, it might prove very advantageous to the middle Persons; and this produced that kind of Practice now known by the Name of *Exchange*, which as it was invented by, so it continued long in the Hands of the *Lombards*. For this Purpose, they settled themselves in most of the great Cities in *Europe*; and having a strict Correspondence one with another, they managed this new Branch of Business of drawing and remitting Money with vast Advantage to themselves; and to do this the more effectually, they entered into Partnership, kept large Houses, and had vast *Capitals*, which were stiled *Banks*, and as it was their Custom (as indeed it was of all sorts of Merchants) to live together, so the Street in which they resided in this City acquired from thence its Name, and though things are long since changed, yet it is still inhabited by *English Bankers*, and retains its old Name of *Lombard-street*.

We may discern the wonderful Effects of Industry in this Invention; for the *Lombards* inhabiting an inland Country, drew by this means to themselves a very considerable Profit out of Foreign Trade, and made *Milan*, and other great Cities in which they resided, Populous and Opulent by their becoming the Center of their Exchanges. But when the *Genoise* fell into it, they began to carry it farther; for they not only drew and remitted Money, but lent it also, and by this means as their Profits increased, they began to slight their Foreign Trade; or rather their *Capitals* however large, becoming unequal to the double Demands of *Commerce* and *Banking*, the former gave way to the latter, as the most secure, if not the most profitable, and by this Alteration *Individuals* became immensely rich and great, while the *State* grew weak and poor; and thus the *Republic* of *Genoa* dwindled into a low Condition, and by degrees was obliged to pawn almost all its Revenues to its own BANK of *St. George*, which amidst a long Series of Foreign Wars and Domestic Seditions, remained unhurt and inviolate till the last taking of that City by the *Austrians*, when the Bank of *St. George* met the same Fate with the *Common-wealth*, and whether either of them will recover their former Lustre, is a *Problem* that must be left to *Time* to resolve.

But we must now look to another Part of the World. In the middle Age of the *German Empire*, that is, about the middle of the thirteenth Century, there was formed a Confederacy of many Maritime Cities, or at least of Cities not far from the Sea. This Confederacy solely regarded Commerce,

TRADE and COMMERCE. 403

Commerce, which they endeavoured to promote and extend, by interesting therein a great number of Persons, and endeavouring to profit by their different Views and different Lights. Though the Cities of *Germany* held the principal Rank in the TEUTONIC HANSE, they did not however forbear associating many other Cities, as well in *France* as in *England* and in the *Low-Countries*, the whole however without hurting the Authority, without Prejudice to the Rights of the Sovereign on whom they depended. This Confederacy had its Laws, its Ordinances, and its Judgments, which were observed with the same Respect as the Maritime Code of the *Rhodians*, who passing for the ablest Seamen in all Antiquity, their Constitutions were observed by the *Greeks* and *Romans*. The *Teutonic Hanse* grew in a short time to so high a Rank in Power and Authority by the immense Riches it acquired, that Princes themselves rendered it a sincere Homage from Principles of Esteem and Admiration. Those of the *North* principally had frequent Occasion for their Credit, and borrowed of them considerable Sums. The Grand Masters of the *Teutonic Order*, who were at that time Sovereigns of *Livonia*, declared themselves Conservators of the Rights and Privileges of the *Hanse*: All succeeded, not only to, but beyond their Wishes; and *Germany* charmed with their Progress, looked on them with the same Eyes as a curious Gardener does on certain rare Plants, though not of his own Raising and Culture. The Kings of *France* and *England* granted also various Privileges to the *Teutonic Confederacy*; they exempted their Vessels in case of Shipwreck from all Demands whatsoever from the Admiralty, or from private Persons; they forbid any Disturbance to their Navigation at all times; and even when *France* was at War with the Emperor, or the Princes of the *North*. In fine, during the Course of those unhappy Wars, which were stiled *Croisades*, the *Hanse* was signally consulted, and gave always puissant Succours in Money and in Ships to the *Christians* oppressed by *Infidels*. It is astonishing, that Cities at so great a Distance from each other, subject to different Kings, sometimes in open War, but always jealous of their Rights; it is, I say, very astonishing, that these Cities should be able to confederate and live together in so strict a Union. But when this Union had rendered them very rich and powerful, it cannot seem at all strange, that on the one hand, they grew arrogant and overbearing, took upon them, not only to treat with Sovereigns on the foot of Equality, but even to make War with them, and more than once with Success. It will on the other hand appear still less strange,

404 TRADE and COMMERCE.

that such Behaviour as this awakened various Princes to a more particular View of the Dangers that such a League might produce, and the Advantages that would naturally flow to their respective States, by recovering their Trade thus made over, at least in some part, to others, entirely to themselves; and these in few Words, were the Causes of the gradual Declension of the *Hanfiatic Alliance*, which, however, is not totally dissolved at this day. The Cities of *Lubeck*, *Hamburg*, and *Bremen*, maintaining sufficient Marks of that Splendour and Dignity with which this Confederacy was once adorned.

We must now turn our Eyes to *Portugal* and *Spain*, where in the Space of about Fifty Years, there happened a train of Events, which gradually led on to such Discoveries as chang'd the whole Face of Affairs in the Commercial World, and gave to the Knowledge of later Ages, what for some thousand Years had been kept secret from all Mankind, I mean a perfect and distinct Notion of that *terraqeous Globe*, which they inhabit. The Kingdom of *Portugal* was small, but well cultivated, very populous, and blessed with a Variety of good Ports, all which, however, had stood them in little stead, if they had not had a Succession of wise Princes, who instead of involving themselves in War with their Neighbours to gratify their Ambition, endeavoured to extend the Happiness and Wealth of their Subjects, and by so doing their own Power, in the softer and more successful Method of protecting Arts and Sciences, encouraging Industry, and favouring Trade; this, with the convenient Situation of their Country, in the beginning of the fifteenth Century, prompted some lively Spirits to attempt Discoveries, and these countenanced by an heroic young Prince, pushed on their Endeavours with such Success, that step by step the Coast of *Africa* was surveyed as far as the *Cape of Good Hope*, to which they gave that Name. The Point they had in view, was a new Route to the *East-Indies*, which *Vasquez de Gama* happily discovered; and in a short Space of Time *Portugal*, from one of the least considerable, grew to be one of the richest Powers in *Europe*, gained prodigious Dominions in *Asia* and *Africa*, and raised a Naval Power superior to any thing that had been seen for many Ages before.

But while this was doing, and doing in the slow Way of Experience, where one small Discovery made way for another; *Christopher Columbus*, a *Genese* of great Capacity, tho' of almost unknown Original, who had been bred to the Sea from his Youth, and who had carefully studied what others

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TRADE and COMMERCE. 405

made a Trade, formed in his Mind the amazing Project of counteracting Experience, and sailing to the *Indies* by a *West* Course. He offered this Project to the *Portuguese*, by whom it was considered and rejected as a Chimera. He proposed it afterwards to other States, but with no better Fortune; and at last owed the Discovery of the New World to the high Spirit of a Heroine, the famous *Isabella* Queen of *Castile*, who almost at her own Expence, and with very little Countenance from her Husband, who yet was stiled *Ferdinand the Wise*, furnished the adventurous *Columbus* with that poor Squadron, with which at once, in spite of all the Difficulties that the Envy of his Officers, and the Obstinacy of his mutinous Crew threw in his way, perfected his Design, and laid open a *new Indies*, though in reality, he aimed at the Discovery of the *old*. Neither was this noble Effort of his matchless Understanding defeated; for after his Decease, *Ferdinand Magellan* a *Portuguese*, proposed to the Emperor *Charles V.* the Discovery of a Passage to the Spice Islands by the *South Seas*, which was what *Columbus* aimed at; and though *Magellan* lived not to return, yet in one Voyage the Discovery was perfected. It is inconceivable almost, how many and how great Benefits accrued to *Europe* from these Discoveries; of which however it is certain, that the *Portuguese* made a very indifferent, and the *Spaniards* much worse Use; the former making Slaves of, and the latter rooting out the Natives; which as it was a most ingrateful Return to Divine Providence for so high a Blessing, so it might have been easily foreseen, it would prove, as Experience has shewn it did prove, highly prejudicial to their own Interests, by depopulating very fine Countries, which have been thereby turned into Desarts; and though on their first Discovery infinite Treasures were returned from them, which were coined in the Mints of *Spain*, yet by an obstinate Pursuit of this false Policy, the *Spanish* Islands in the *West-Indies* are now brought so low, as to be scarce worth keeping. The Consequences that naturally followed on the Discovery of a Passage by the *Cape of Good Hope*, and of a fourth Part of the Globe in the Western Hemisphere, were, as it has been already hinted, the Cause of an intire Change in the State of *Europe*, and produced, not only in *Portugal* and *Spain*, but in most other Nations, a Desire of visiting these remote Parts, of establishing Colonies, of setting Manufactures on foot, of exporting and importing Commodities, and of raising, settling and protecting new Manufactures. By this means, as the Reader cannot but perceive, not only

406 TRADE and COMMERCE.

Particular Nations brought about signal Advantages to themselves, but *Europe* in general received a lasting and invaluable Benefit: for its Potentates made themselves formidable, and even terrible in those distant Parts of the Earth, and where their Fame had hardly reached before. It is however true, that this has not been carried as high as it might have been; for though there was room enough for every Nation to have had its Share, and though it might be demonstrated that the Good of *the whole* would have contributed sufficiently to the Profit of *every State*, the Subjects of which had engaged in this Traffic; yet instead of prosecuting so natural and so equitable a Measure, they have taken a quite contrary Course, and by decrying, attacking and destroying each other, have very much lessened that Reverence, that prodigious Reverence, which the *Asiatics*, *Africans*, and *Americans* at first had for the Inhabitants of *Europe*. Yet we have still vast Dominions, and a prodigious Power in those Parts; nor has it entered into the Minds either of the Bravest, or the most Ingenious of those Nations, to attempt sharing the Benefits of Commerce, or of making Rep:isals upon the *Europeans*; though, for all this, we are indebted to the Dispositions of all-wise Providence, and seem to be preserved in spite of our own Imprudence.

The Naval Power of the *Portuguese* received an incurable Wound by falling under the Power of the *Spaniards*; and though human Policy would have suggested, that this alone must have raised the latter to the Monopoly of Commerce, and the universal Dominion of the Sea; yet the very Pursuit of a Design so visibly detrimental to the Interest of Mankind, proved very quickly their Ruin also. For the *Spaniards*, from the natural Haughtiness of their Temper, misled by the boundless Ambition of their Princes, and endeavouring to become the Lords of *Europe*, forced other Nations in their own Defence to make a much quicker Progress in Navigation, than otherwise they could have done. For the *English* and *Dutch*, who till this time seemed blind to the Advantages of their Situation, had their Eyes opened by the Injuries they received; and by degrees the Passion of Revenge inspired them with Designs that possibly public Spirit had never excited. In short, the Pains taken by *Spain* to keep all the Riches that flowed from these Discoveries to herself, and the dangerous, detestable, and destructive Purposes to which she applied the immense Wealth that flowed in upon her from them, produced Effects directly opposite to those which she proposed, and made her Enemies rich, great, powerful,

powerful, and happy in proportion as her Commerce dwindled away, and as her Naval Power sunk and crumbled to Pieces merely by an improper Display, an ill-managed Exertion, and a wrong Application of it.

It was from hence, that the Inhabitants of the *Seven Provinces*, whom her Oppression had made poor, and her Severities driving mad, became first Free, then Potent, and by degrees Rich. Their Distresses taught them the Necessity of establishing a moderate and equal Government; the Mildness of that Government, and the Blessings which it procured to its Subjects, raised their Number, and elevated their Hopes. The Consequences became quickly visible, and in a short Space of Time amazing both to Friends and Enemies; every Fishing Village improved into a Trading Town; their little Towns grew up into large and magnificent Cities; their Inland Boroughs were filled with Manufactures, and in less than half a Century, the Distressed States of *Holland* became High and Mighty; nay in spite of the Danger and Expences which attended a War, made all that time against a superior Force, these People surrounded with Enemies, loaded with Taxes, exposed to personal Service, and to a thousand other Disadvantages, grew up to such a Strength, as not only made the *Spaniards* despair of reducing them any more under their Dominion, but inclined them to wish, and at last forced them to seek their Friendship.

This, at least as far as either ancient or modern Histories inform us, was the quickest and strongest of all the Productions of Commerce that the World has ever seen. For it is out of Dispute, that the Republic of the *United Provinces* owes her Freedom, her Power, and her Wealth to Industry and Trade entirely. The greatest Part of the Country is nothing less than fertile, and what is so, produces not enough to suffice the tenth Part of its Inhabitants, for the tenth Part of the Year; the Climate is rather tolerable than wholesome, and its Havens are rather advantageous from the Difficulty of entering them, than from their Commodiousness in any other respect, at least in the most part. Native Commodities they have few or none; Timber and maritime Stores are entirely wanting; their Country cannot boast so much as of a Coal-Mine; and yet these Provinces, upon which Nature has bestowed so little, in consequence of an extensive Trade are enriched with all Things. Their Storehouses are full of Corn, even when the Harvest in Corn-Countries fails; there is no Commodity how bulky soever, or however scarce and hard to come at, which may not be had from their Magazines.

408 TRADE and COMMERCE.

The Shipping of *Holland* is prodigious; and to see the Quantities of Naval Stores with which their Yards and Ports abound, astonishes those who are unacquainted with the Vigour of that Cause which produces this Abundance. But above all, the Populousness of this Country is the greatest Miracle. That Men should resort to a *Canaan*, and desire to live in a Land flowing with Milk and Honey, is nothing strange; but that they should make it their Choice to force Nature to raise Palaces, lay out Gardens, dig Canals, plant Woods, and ransack all the Quarters of the Earth for Fruit and Flowers, to produce an artificial Paradise in a dead Plain, or upon an ingrateful Heath in the Midst of Fogs and standing Lakes, would in so critical an Age as this pass for a Fable, if the Country did not lie so near us, as to put the Truth of it out of question. Yet till very lately this universal Opulence had no bad Effects upon the Morals of the People; they were modest and humble in their Behaviour, temperate in their Way of living, moderate in their Expences, neat and elegant, rather than sumptuous or profuse in their Buildings, their Grandeur and Magnificence displaying itself in public Edifices, and in whatever else regarded the State. Neither were their Rulers proud, but despised Pomp, and were content to wear (as *Alexander the Great* said of *Antipater*) all their Purple within; that is to say, they exercised a very high Authority without any exterior Ensigns of Dignity, and most happily preserved their Power, by very wisely declining whatever might excite Envy. If this has of late Years suffered any Change, and if Luxury, Pride, Ambition, Vanity and Corruption, have by degrees made their way even into these Provinces, they have drawn their Punishments, and it is to be hoped their Remedies along with them. But however that may be, the Declension of a State furnishes no Argument against the Efficacy of those Causes which produced and raised it. Industry and Frugality made *Holland* what it is, or what it was, and Industry and Frugality will produce the like Effects in all Places.

Thus, in as narrow a Compass as possible, we have traced the general History of this Subject, from the earliest Accounts of Time to the present; we have joined Experience to Speculation, and connected the Proofs drawn for Arguments, with Facts collected from the best Histories. And having thus established beyond the power of Doubting, the Importance of Trade and Commerce universally considered, and shewn, that it operates alike in all Countries and in all Ages; we will next proceed to inquire into the Rise, Progress, and present State

State of it in our own Country, in order to shew that we have not been less indebted to it than other Nations; and that if we do not derive from it still greater Blessings than any other Nations have done, it is our own Fault. It must be confessed that the Topic is difficult, but that we will combat by our Diligence; and tho' it be perplexed enough in its Nature, we will endeavour to render it perspicuous by our Method of treating it, being fully persuaded that nothing can better deserve either the Reader's Attention, or our Pains.

C H A P. III.

Of the commodious Situation and other natural Advantages of this Country, in Point of Trade; and of the Rise, Progress, Declension, and Revival of Commerce in England, under the Reign of Queen Elizabeth.

THE first Inhabitants of this Island were certainly drawn over hither by the Contemplation of the many Conveniencies with which the Country abounded; for if we may be allowed the Comparison, every Country is a kind of Stock which Nature bestows on her Children, and she may be said to be more or less kind to them in Proportion, as this is capable of Improvement with more or less Pains. It is true, that some Writers of a lively Imagination have taken a Pleasure in representing this Matter in quite another Light, and to dwell very strongly upon our natural Wants and Deficiencies. They have observed, that Grass grows here spontaneously, but not Corn; that our Fruits may be reduced to Sloes, Hips, and Haws; and that our Breed of Horses and Cattle were very despicable, till they were mended by Importations from other Countries. But when this comes to be thoroughly considered, we shall find, that there is no good Reason to quarrel with the Disposition of Providence; and a little Reflection will teach us to discover, that Things must have been originally in that very State in which they are recorded to have been by the inspired Historian of the first Ages; that is to say, the Parents of the human Race were created and placed in the most benign Climate, and in the most fertile and pleasant of all Countries; from whence, as their Numbers increased, and the Arts and Sciences subservient to their Happiness were invented, they spread them-

selves

410 *TRADE and COMMERCE.*

selves farther and farther, improving the natural Advantages of those Countries in which they settled, and bringing thither what they could not be without at first, and by degrees whatever else they thought expedient and requisite to their Welfare.

Paradise, or a Country naturally productive of every thing needful, useful, or pleasant, was not only fit, but absolutely necessary to the human Species in their Infancy; but when by the just Decree of Heaven, Man was left to earn his Bread by the Sweat of his Brow, it became requisite that Contrivance and Foresight, Oeconomy and Prudence, as well as Pains and Labour, should be employed to render every Country habitable and commodious. This appears to have been the Divine Will; this became the Duty of Men; and from this Disposition it is plain, that the Dispersion of our Species over the Face of the whole Earth, was conducted by that Providence that had adapted the human Faculties to acquiring, wherever they were, the Means of subsisting comfortably. When therefore such as dwelt on the Continent formed Projects of passing into, and possessing themselves of Islands, they neither could nor did expect that they should find the Plains ready cultivated, or the Mountains stored with Fruit-trees; because such an Expectation would have been wild and unreasonable; they might as well have looked for Rivers of Milk, and Lakes of Honey.

But some Things they had just Reason to hope for, and these they found. A Country producing many things of itself, and those too in vast Abundance. Over-grown with Timber, which when cut down, furnished Houses for Habitation, Utensils of every kind, and Vessels for the transporting them, a Number of fine Ports on every Side of the Island, which is the greatest Blessing, as well as the peculiar Glory of such a Land. The Climate tolerable, and in proportion as they improved the Soil, made temperate and pleasant; the Earth fertile in its Nature, tho' not of itself admirably disposed for all the Uses of human Life, spreading in some Places into wide and copious Plains, confined in others by high and shady Mountains, and every where watered either by large navigable Rivers, or small, but still useful Brooks. In short, a Place every way fit for the Reception of rational Beings, and capable of being made by their Attention and Industry, what we see it is made, one of the fairest, finest, and the fruitfullest Countries in *Europe*; that is to say, a distinguished and excelling Portion, of the finest Quarter of the Earth. This is no flowery Description

TRADE and COMMERCE. 411

traced by the Pencil of Fancy, on the Canvas of a heated Imagination, but a cool and clear Representation, drawn by the Pen of Impartiality, guided by the Light of Experience, and expressing simply and plainly the Dictates of Reason and of Truth.

We may from hence conceive, that foreign Commerce by the Natives of this Island must have been a Work of Time; for Men think first of Necessaries, then of Conveniencies, and last of Superfluities. Those who came originally from the Continent might have better Notions of Things; but as it must be presumed, that either Fear or Indigence drove them hither, so it is easy to apprehend, that succeeding Generations must for some time sink much below their Ancestors, in their Notions of the Commodities of Life, and deriving their Manners from their Circumstances, become quite another Sort of People. But those on the opposite Continent, knowing that this Island was inhabited, and having the Use, tho' in ever so imperfect a Degree, of Vessels, and of foreign Traffic, came over hither, and barter'd their Goods for the raw Commodities of the *Britons*, till by degrees perhaps they taught the latter to make some Improvement in those slight Leather and Wicker Boats, which they used for passing their own Rivers, and creeping along their Coasts, till at last they ventured themselves over to *Gaul*, and entered upon some kind of Correspondence with their Neighbours. All this is so deducible from the Laws of Nature, that we might have divined thus much by the Light of Reason, if we had not the Commentaries of *Cæsar* to guide us, and to strengthen by the Authority of History the Facts that might have been found out by the Force of rational Conjecture.

Things were precisely in this Situation when the *Romans* invaded *Britain*; and there is no doubt, that our Ancestors falling under the Power of that Empire, and under its Power at a time, when with respect to Arts and Sciences it was in a most flourishing Condition, was a great Advantage to them; and tho' from their Love of civil Liberty, which when under the Direction of Reason, is the most natural and laudable of all Passions, they made a long and vigorous, and in some Sense a noble and glorious Resistance; yet by degrees they caught the Manners and Customs of their Conquerors, and grew content to be happy rather than free. With Learning and Politeness the *Romans* introduced foreign Commerce; and according to the Nature of their Policy, as they made high Roads through the Island, established Colo-

nies

412 *TRADE and COMMERCE.*

nies in proper Places, and fixed standing Camps, which were a kind of Fortresses, where they thought proper; so they were no less careful with regard to Marts or Emporiums for the Conveniency of Traders, and of which what they found is uncertain; but that they left many is without question, and amongst the rest *London*, which is not more famous for her present extensive Trade, than venerable for her unrecorded Antiquity. A City peculiarly happy in its Situation, the Pride and Glory of this Island, the Fame of which her Merchants have spread to the utmost Limits of the World, while her Origin remains beyond the Reach of Search, and decides the vain Endeavours of the most laborious Antiquaries.

When the *Romans* unwillingly left *Britain*, and the *Britons* as unwillingly made way for the *Saxons*, a new Deluge of Barbarity overflowed this Island; almost all the Improvements of our civilized Conquerors were defaced, and upon the Establishment as it were of a new People, Things were all to begin again. This necessarily took up a great deal of Time, and before they were in any tolerable Posture, the *Saxons* found themselves distressed by fresh Swarms of *Barbarians*. Yet there still remains some Evidences of their having been acquainted with, inclined to, and if their Circumstances would have permitted, most certainly would have entered upon, and carried foreign Commerce to a great Height. We have authentic Testimonies, that *Alfred the Great* formed Projects of vast Discoveries to the North, as he actually sent Persons of great Prudence and Abilities into the East; and the Curiosities which they brought Home, were for many Ages preserved in the Treasury of the Church of *Salisbury*. I say nothing either of his Fleets, or of those of *Edgar*; tho' I am persuaded, that the Opinions entertained of them by the Moderns, are far more despicable than Reason will warrant. But how mean soever their Ships were, Ships they had, and in great Numbers; and that they should have these and Men to navigate them without any Trade, is, I think, what the Reader will hardly believe any more than myself; but what sort of Trade it was, or how carried on, is a Question not to be discussed here.

As for the *Danes*, they were not long our Masters; but as they became so by a maritime Force, and as their Countrymen had established themselves not only on the opposite Shore of *France*, but in other Parts of *Europe*; so it is reasonable to believe, that they held some Correspondence with them from hence, and that if their Dominion had lasted longer, this might have been better regulated, and productive
of

TRADE and COMMERCE. 413

of many Advantages. But they had soon to do with their Brethren in another way; for the *Normans*, Men of the same Race, but better established in another Country, dispossessed them here, and partly under colour of Right, partly by Force, erected that Monarchy, which not without various Alterations and Changes, subsists even to our Times, and to the Subsistence of which, with the Help of those Changes and Alterations, we owe that happy Constitution under which we live; that universal Improvement which adorns the Face of our Country; that Domestic Trade which nourishes so numerous a People, by plentifully rewarding their Industry; and that extensive Commerce which is at once the Source of our Wealth, and the Support of our Liberty.

It cannot be expected that in a Piece like this, we should attempt to trace the Progress of Trade through every Reign, shew how it was encouraged and protected, or discountenanced and checked; what Occasions were luckily seized, or what Opportunities unfortunately lost; for these would require a large Volume: the Subject, it is true, is important, interesting, and entertaining; but at the same time, much too curious to be handled hastily, much too copious to be crowded in a narrow Space; besides, our Design no way requires it. It is sufficient for us, after what has been already said, to observe, that the Opinion commonly entertained, of our having little or no Trade before the Reign of Queen *Elizabeth*, is very far from being well founded; and yet to assert the contrary of this, would be to run into another Extreme equally vicious; for the middle Way in this, as in most other Cases, is the best; and therefore as this Work is calculated for the Benefit of young People, it is of the last Consequence to give them right Notions of Things, and to prevent their being led away by false and ill-grounded Opinions; since Ignorance, or rather the want of Knowledge, though a Calamity great enough, is still less a Calamity than false Knowledge; for we had better conceive nothing than conceive amiss of Things; because such Errors when early imbibed, are not easily amended. We will therefore briefly and clearly unfold the Reasons which induce us to believe, that this Nation really enjoyed a considerable Trade before that auspicious Reign, from which it is not at all in our Inclination to detract; we will next shew what those Difficulties were, under which our Commerce laboured under the Reigns preceding that; and lastly, we will give a short Account how those Benefits and Advantages arose, of which we have been since possessed.

It

414 *TRADE and COMMERCE.*

It is no difficult thing to make it evident from *Facts*, that the *English* Nation had a very considerable Share of Trade in all Times ; and what we have already said upon the Subject, is sufficient to prove it in those before the *Norman* Conquest. From that Time, let us have leave to remember, that there was no want of Wealth in this Kingdom ; that the Conqueror himself and his two Sons, raised immense Sums of Money, considering the Times in which they lived ; and though these Sums at first sight appear inconsiderable to us, yet that is only for want of due Consideration ; for as every Shilling contained then above three times as much Silver as it does now, it is plain, that every Sum they levied was three times as much as it appears to be. In the Reign of *Henry II.* Luxury was at a prodigious Height, as our authentic Histories inform us ; and this implies, that all Foreign Commodities were then plenty in *England*. Now it is impossible, that those Impositions could be raised, or this Abundance of Foreign Commodities be produced, any other way, than by the Exportation of our own ; for Gold and Silver were not of our own Growth then, any more than they are now. In the twenty-eighth of *Edward III.* that is, in the Year 1354, we have a Record in the Exchequer, shewing the Exports and Imports, by which it appears, that the Balance of our Trade produced 255,214*l.* 13*s.* 8*d.* which considering the Difference of Money then and now, is about 737,021*l.* 16*s.* 11*d.* as we reckon it at present ; and yet there is no notice taken in this Account, either of Tin or Lead, or of other Staple Commodities, which were certainly exported ; and yet all things considered, this must appear a most amazing Proof of the early Profits of our Commerce. We may add to this, the great Wealth of the City of *London*, which appeared by the Loans made to several of our Princes, and the frequent Exactions for confirming, restoring, or augmenting their Privileges, which could arise from nothing but Trade ; and the same Reasoning may be applied with a proportionable Degree of Weight to all the other Corporations in the Kingdom. The ordinary Revenue is another Proof which arose from Customs upon Merchandize, granted from time to time by Parliament, according to the Necessities of the State ; and not to multiply Arguments in so clear a Case, let us add the several Statutes relating to Trade, Charters to Corporations, Grants to Bodies Politic, and to particular Persons, all which are incontestable Evidences that we had Trade,
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TRADE and COMMERCE. 415

and that in such a Degree as rendered it an Object worthy of our public Councils.

But that after all, our Trade then was very unlike what it is now, is a thing readily agreed upon; and among the many Reasons that may be assigned for this, we will endeavour to state a few of the most considerable. Most of our Princes had Foreign Dominions, and these entailed upon us a very heavy Expence, even in Time of Peace, besides involving us often in dangerous, destructive, and expensive Wars. The Dutchy of *Normandy* was so expensive, that King *John* was glad to part with it for a very trifling Consideration. In the first Ten Years of King *Henry VI.* though we were in quiet Possession, yet it cost the Nation near Eleven Thousand Pounds a Year; and Five Years after, the Charge was grown up to upwards of Thirty-four Thousand Pounds a Year. In the Reign of *Edward III.* the Places we held in *France* cost Forty-two Thousand Pounds *per Annum*; and much more upon this Head may be seen in Sir *Robert Cotton's* Discourse on this Subject. The preserving therefore, and augmenting their Foreign Territories, being the great Object of the Administration of these *Norman* Princes, they were the less able to attend our Trade, which it is certain will not flourish, unless it be attended to: Another Mischief flowing from the same Cause, was the Want of a Naval Force; and though it must appear strange, and almost incredible, yet it is nevertheless true, that when we had most occasion for Fleets and Transports, we were least careful about Shipping; what we had, indeed, was employed for these Services, and this was a great Hardship upon Trade; but we were forced to submit to a still greater, which was that of hiring from time to time great Numbers of Vessels from our Neighbours; and this not only from the *Flemings* who lay near us, and from the *German Hanse* Towns which were at no great Distance, but from the *Venetians*, the *Genoese*, and, in short, from all Places where they could be had, and where the People would be so kind as to take our Money. Another, and the greatest Grievance of all was, that for several Centuries the Bulk of our Trade was carried on by Foreigners; and by a very strange Insatiation, not only Grants and Charters, but Statutes and Acts of Parliament were made for encouraging and supporting this Grievance. The Shipping of the *Hanse* Towns brought us all the Commodities of the *North*; the *Flemings* poured in their Goods of all sorts; all *Italian* and *East-India* Goods were brought us by the *Venetians*; on the other hand, the Staple
of

416 TRADE and COMMERCE.

of our Wool was fixed sometimes at one great Town in the *Low-Countries*, sometimes at another, and lastly at *Calais*, but almost always out of the Kingdom, which was a much greater Hardship, than the Exportation of Raw Wool; and even this was encouraged longer than it need have been. The Merchants of the *Hanse*, or of the *Steel-yard*, exported the greatest Part of our Commodities, or Manufactures, from hence, down to the Reign of King *Edward VI.* and Queen *Mary*; and as for the Exchange of Money, that was entirely in the Hands of the *Lombards*; and even so low as Queen *Elizabeth's* Time, many of these Mischiefs remained unremedied; for as Sir *William Monson* tells, the last *Venetian* Carrack that came hither was lost in her Reign, entering the Port of *Southampton*.

By degrees, all these Inconveniencies were discovered, the great Importance of Commerce discerned, the proper Remedies sought for and applied, the necessary Rewards of Industry bestowed, and the chief Defects in our Constitution removed. It is the common Opinion, that we stand indebted for all these Benefits to the Reign of Queen *Elizabeth*; and it is indeed true, that many of them were brought about in that Reign, and others perfected, yet something ought to be referred to former Reigns, and not a little was left to be completed by the Successor of that great Princess. The Truth of the Matter is, that the Politics of *Henry VII.* were of very great use to his Subjects; that wise Prince loved his own Country and People, or which had as good an Effect, he laboured to establish his own Power by promoting their Interests. It was this, that engaged him to humble the Pride, and to sap the Power of the Nobility, to encourage Traders, to protect the common People, and to emancipate all Degrees, at least in a great measure, from that sort of constitutional Slavery they were under. He was a Monarch that had no foreign Views, but was content to render himself formidable, by fixing his Power firmly in this Island, the first of our Kings from the Conquest that kept clear of Wars upon the Continent, and received Money from Abroad for keeping his own Money and his Troops at Home. By these Methods, and some others that were not quite so honourable, this Prince amassed a vast Treasure, and left a Million and a half behind him in the Coffers of the Crown; a Thing that as it was without Precedent, so it stands above the Reach of Imitation.

His Son *Henry VIII.* relapsed into the old Errors of making a Figure, Fighting and Negotiating upon the Continent,

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TRADE and COMMERCE. 417

by which he squandered away his Father's Wealth; and tho' to be sure, he was very magnificent, and carried the Glory of the *English* Nation to a great Height, yet he impoverished his Subjects, debased our Coin, and if it had not been for his Quarrels with the Pope, would have sacrificed our Interests to his own Vanity throughout his Reign. The only good Thing he did, was to encourage that Spirit of Discovery which sprung up in his Father's Time, and to open a Way for the Reformation, which was, in many Respects, favourable to our Civil Interests, and to our Trade in particular. In the short Reign of King *Edward*, some of his principal Ministers, such as Sir *William Cecil* and Sir *Thomas Smith*, had very true Notions of Commerce, and laboured very sincerely for the Good of their Country. But all the Good they did, was in a manner overturned in the succeeding Reign of Queen *Mary*, which however did us very singular Service in this Respect, that it for ever demolished all Notion of connecting our Interests with those of the Continent, farther than was requisite for our own Defence, and to keep the Scene of War at a Distance. Thus the Miseries of a Country frequently in one Age, become the Causes of its Felicity in another.

The Reign of Queen *Elizabeth* was Great and Glorious, in whatever Light we consider it, but it has always appeared most so to me in this, that it became Great and Glorious by the Blessing of God upon the Wisdom and Prudence of the Queen and her Ministers. This Nation never was in so desperate a Condition as at her Accession. The Crown was in Debt, the Treasury empty, the Nation involved in a foreign War directly against her own Interests, her Coasts naked; in a word, without Credit abroad, and without Concord at home, no settled Religion, the great Men split into Factions, and the common People distracted, and dejected. Sad Circumstances these! and yet from hence arose the Grandeur of that Reign, and the Establishment of our Commerce. The Queen found herself obliged to act with great Caution to derive Assistance from every Quarter, to employ it faithfully, and to promote to the utmost of her Power, the Welfare of her Subjects, whom nothing but the Public-spiritedness of her Government, could enable to grow Rich enough to support the necessary Expences of the Crown. It was this gave a popular Turn to her Councils, and taught her to be the Mother, that she might be the Mistress of her People. She encouraged them to arm against the *Spaniards*, that they might be accustomed to the Sea, and acquire

418 TRADE and COMMERCE.

quire that Knowledge in Navigation, with which, till then, they had been unacquainted. She passed many Laws for the public Good, erected several Companies, and saw that those Companies pursued the Ends for which they were erected; in short, she did every thing that could be expected during the whole Course of her Reign, to excite and encourage Industry at home, and to enable us to make a proper Figure abroad; not as Busy-bodies, meddling in every Quarrel, but as an active and trading People, and by Degrees as a Maritime Power. In a word, she furnished us with Stock and Credit, put us upon improving our Commodities and Manufactures, brought the Art of Ship-building amongst us, filled our Ports with able Seamen, shewed a just Respect to *English* Merchants, reduced *Ireland*, so as to render it beneficial to *Britain*, and approved our sending Colonies into *America*; and thus the Seeds of our Wealth were sown in her Time, though the Harvest was reaped in the Days of her Successors, till we grew wanton with Plenty, and hazarded all we had obtained, by a Civil War, that not only checked the Growth of our own Commerce, but gave vast Advantages to our Neighbours, which with equal Industry and Prudence they pursued. This is a short, and to the best of my Judgment, a true History of our Commerce, from its first Rise to its full Growth; we will next endeavour to shew what it now is, and what Advantages we derive from it.

CHAP. IV.

The natural Advantages, distinguishing Prerogatives, and valuable Commodities of Britain; together with some Remarks on their Consequences, in augmenting the Wealth, as well as in increasing the Number of its Inhabitants.

IN order to judge of the peculiar Value, and to form a right Idea of the true Character of any Country, we ought to consider first, the intrinsic and natural Advantages, and next the Conveniencies of which it stands possessed, with reference to its Safety from powerful Neighbours, Intercourse with its natural Allies, and Commerce with the rest of the habitable World. For by a due Attention to each of these Points, joined with a perfect Comprehension of their Correspondence

respondence and Connection with each other, we may be enabled to frame a right Estimate of the Worth of any Country; that being to all Intents and Purposes the best, and the most considerable, in which they all conspire, and so in proportion, as they have more or less, either of natural Commodities, or Conveniencies for foreign Trade. But we must carefully observe, that though the first is of real Benefit, yet the latter is of infinitely greater Service: for it is very possible, for Countries to be rich and fruitful in themselves, as *Poland*, *Hungary*, and *Transilvania*, and yet the Inhabitants in general very poor; as on the other hand, a Country in itself may be mean and poor, and yet from its Situation, and their own Industry, the Inhabitants may be rich and prosperous; as for instance, in the State of *Genoa*, *Switzerland*, and above all, the Dominions of the States General of the *United Provinces*.

There is a natural Affection, and if I may be indulged the Expression, a laudable Partiality in every Nation for its own Country; and there is no doubt, that the People of *Britain* have in all Ages had their Share of this Disposition; and yet independent of this, we may safely affirm, that with respect to natural Advantages (for as to other Excellencies, we shall examine them in our subsequent Chapters) there are very few Countries that are blest with greater than our own. There are indeed warmer and richer Climates, but very few so temperate, so wholesome, and so pleasant. Our Summers are moderately hot, and our Winters for the most part are very tolerable in respect to Cold; so that we are free at least, from those Inconveniencies that are produced by either of these Extremes, and enjoy all, or the greatest Part of those Advantages, which are the Boast of other Climates. We have almost every kind of Soil within the Compass of our Island, and the Improvements made of late Years especially, have naturalized many of the Fruits, a great Variety of medicinal Plants, and some of the most valuable Commodities of other Countries. As for instance, Apricots, Peaches, and Melons, nay, the Pine Apple too, come here to very high Perfection. Saffron is not inferior to any in *Europe*, and Woad, Madder, Safflower, Hemp, and Flax, arrive at full Maturity here, though none of these are Natives of our Country. Our Pastures may be justly stiled Excellent, and the Verdure of this Country strikes Foreigners with Wonder. The Land is charmingly diversified with spacious Plains, beautiful Hills, fruitful Vallies; and though in some Places it swells into rugged Mountains, and even into a

420 *TRADE and COMMERCE.*

kind of Alpine Ridges, that run their rocky Course for many Miles together; yet even these, though barren on the Surface, contain infinite Wealth in their Bosoms, and pour out many noble navigable Rivers that furnish us with the Convenience of Water-Carriage, and thereby contribute to Domestic Trade, and that happy Intercourse between all Parts of the Island which communicates its Blessings, and is thereby the Parent of universal Plenty.

There is no Wonder therefore that so amiable an Appearance, either excites a strong Affection in the Natives, or has Charms sufficient to invite over Strangers, or to retain amongst us such as accidentally come hither. The strongest Testimony in favour of any Country, is the Number of its Inhabitants; and for the last two Centuries, the Increase of People in *Britain* has been prodigious. The Blessing is still continued to us, not only by the inviting Prospect of our Country, but by the superior Excellencies of our Civil Constitution, which may be so truly said to transcend those of our Neighbours, and even of such as make the highest Boasts of Liberty, that in reality there is no Comparison between them. In other Countries, a Man must be of a certain Rank, or attain to a certain Fortune, before he can taste the Sweetness of Freedom; but in *Britain* the Meanest is upon a level with the Greatest, and while he infringes no known Law, his Privileges are the same, and he has as little to fear. In all other Countries, there is a kind of Ecclesiastical Jurisdiction, that lays Men under various Inconveniencies; but with us there is no such thing, every Man has the Power of worshipping God his own Way, and no Man is allowed to disturb another for not worshipping his Way. As our Liberty is extensive, so our Property is secure; a Stranger here may employ his Money in what manner he pleases, and when, either by Industry or Frugality he has augmented his Fortune, he may do with it what he thinks fit while he lives, and leave it to whom he thinks fit when he dies. In most Trades the Masters in our great Cities give considerable Wages, Artists are as much encouraged here, as in any Part of *Europe*; and in short, there are so many Ways of getting Bread in this Island, and it may be eaten, when got, with so much Satisfaction and Pleasure, that it is no wonder that most People return from our Factories and Plantations when they have done the Business they went for, or that Strangers resort hither annually in such Crouds as they do.

The

TRADE and COMMERCE. 421

The Fruitfulness of a Country, joined to the Number and Industry of its Inhabitants, serve to produce and to augment its Commodities, of which some without Sagacity are not to be discovered, others are not to be obtained without Labour, and few or none are rendered of immediate Value without being at some degree of Trouble and Expence. Yet these are very justly stiled Natural Advantages; because, let the Number of Inhabitants be what it will, let their Pains be ever so great, and their Skill ever so extensive, though they might find it easy to improve, they will by Experience be taught, that it is impossible to force Nature. But we meet with no such Obstacles here; the Number of our Commodities might be easily augmented, and yet it would be very hard to compute very exactly what we have already. The most considerable, however, are these. In our Pastures we feed all sorts of useful Animals; our Sheep are the peculiar Glory of the Island, as their Wool is one of its Staple Commodities. We have an excellent Breed of Black Cattle; those of *Lincolnshire* and *Holderness*, not inferior in Size, or any other way, to those of *Dalmatia* or *Sclavonia*; these, besides their Flesh, yield us Variety of Commodities, such as Leather, Tallow, Horns, &c. We have likewise Horses, and those almost of every Kind, small, strong, and yet serviceable, which notwithstanding, may be bought cheap, and are kept at a small Expence; others of the large Draft Kind, equally valuable for their Soundness and their Strength; for the Saddle, hardly any Country produces better, and very few so good. Of Race Horses, which are of great Consequence in forming and maintaining our Studs, we have those that are excellent in their Kind, and have fetched very high Prices; neither are we, that I know of, deficient with respect to any sort of useful Animals. As for the Produce of the Earth, we have Corn of all sorts, each good in its Kind, and in great Quantities, *viz.* Wheat, Barley, Oats, and Rye, as also Beans and Peas, with other kinds of Pulse. Oily Seeds in great Abundance, such as Rapeseed, Linseed, Coleseed, Mustardseed, &c. the finest Saffron, Teazles, Woad, Madder, &c. for the use of Dyers; Hemp and Flax, Cyder, Honey, Cheese, &c. and Timber of all sorts. In the Bowels of the Earth again, we have a great Variety of useful Clays, such as *Fullers-Earth*, *Windsor Loam*, Tobacco-Pipe Clay, as also various other kinds for the use of Potters, Fullers, &c. Medicinal Earths; not to mention what is made use of for Tiles, Bricks, Plaster, Flooring, Ceiling, &c. a vast Variety of useful Stones, from Fire-stone, Lime-stone, &c. to Free-stone, *Purbeck*, *Portland*,

422 TRADE and COMMERCE.

Portland, and even Alabaster and Marble. Minerals of many kinds, such as Antimony, Lapis Calaminaris, Black Lead, &c. Coal Pits and Sea Coal, Jet, Crystal, Allum, Copperas, Salt, and most kind of Metals, such as Tin, Lead, Iron, Copper, Silver, and many other Things.

We may add to all these, as properly belonging to this Country, and making a Part of its natural Riches, the Commodities that are brought from our Plantations, which are very numerous; but the chief of them are these, Sugars, Melasses, Ginger, Tobacco, Indico, Pimento, Cotton, Cocoa, Drugs, Rice, Tar, Turpentine, Train Oil, Whale-fins, Peltry or Furrs, Masts, Pitch, Rosin, Logwood, Fustick, Walnut-tree Plank, Cedar, &c. It is true, that most of these contribute, either to our Manufactures, or to our Exportation abroad; but in this Chapter, I consider them barely in the Light of Commodities, and of *British* Commodities, as being the Produce of our Fellow-Subjects Labour, though at a distance; or they may be considered in another light as our own, since they are purchased and come into our Possession by the Exchange of natural Commodities, or at least, a very great part of them, and as for the rest, I do not pretend to meddle with them here. In regard to our Fisheries at Home and Abroad, I shall treat of them in a Chapter by themselves.

In order to form a Judgment of the great Advantages that arise to a Country from a Multitude of Commodities, we are first to consider with what Labour they are attained, and how this contributes to the Subsistence of incredible Numbers of different Ranks and Degrees. As for instance, what prodigious Swarms of People are maintained by Tillage from the Land Owner, or Possessor of the Soil, down to the Boys that hold the Plough, and the Women that glean in the Harvest! If we turn our Thoughts to the Saffron Culture in *Essex* and *Norfolk*, we shall find that it gives Bread to the Inhabitants of several considerable Villages, and of some Towns; the same may be said of Hemp and Flax, not considered in the light of Manufactures, but as Commodities only, for they pass through a great Variety of Hands in their Cultivation and Dressing, before they come to the Market as raw Commodities. We may carry our Notions much farther, if we consider Hops in this light, the planting, hoeing, weeding, picking, and drying of which, employ a Multitude of Hands, and constitute the chief Part of the Riches of different and distant Parts of the Kingdom; for example, in *Hampshire* and *Surrey*, in *Kent* and

TRADE and COMMERCE. 423

in several of the Western Counties. With respect to Stone, Lime, and Clay, as well as Chalk, and other Things dug out of the Earth, they furnish Subsistence also in the first Instance, to great Numbers. Yet all these are but few, in Comparison of those that get their Bread in the Coal-Mines, amounting in the different Parts of this Island to many Thousands of Families; neither are these more numerous than those that are employed in the Salt, Copperas, Allum, and other Works of that Nature. And perhaps all these taken together, yield in Number to those who are subsisted by Minerals and Metals; since these are so considerable as to form distinct Bodies of People, who in that light are governed by particular Laws, enjoy several Privileges and Immunities, and are compensated for the extraordinary Pains they take by many other Advantages. Such are the Tanners in the *Western* Counties under the Protection of the Lord Warden of the Stannaries, who, as often as occasion requires, has Power to call an Assembly, which has the high Title of the Parliament of Tanners, and the Prerogative of making Laws for redressing Grievances and promoting the Interests of these People. The same may be said of the Miners in *Derbyshire*, who have also great Privileges derived from peculiar Jurisdictions. Those who work in the Iron and Lead Mines in the *North*, have their Share also in the like Immunities, and all together make up a vast Body of robust, active, and stout People. We may from hence discern, that the Labour necessary to the procuring of Commodities, is in itself a vast Advantage to a Country, as it furnishes Employment to the Poor, creates a necessary Intercourse between a vast Variety of Artificers, occasions the erecting a Multitude of Villages, and some large Towns, at the same time that it renders the Proprietors of the Soil, from whence these Advantages are raised, rich in respect to Property, and at the same time considerable in regard to Influence.

But before we quit this Subject, there is another Point that also requires our serious Consideration, and that is the Benefits arising from Carriage, which are still greater and more considerable than those that have been already mentioned. The Reader will easily discern that this may be applied in most of the Instances considered under the former Head; but because we will endeavour to be as concise as is consistent with Perspicuity, we will insist only on two, and those but briefly. The first shall be Corn, in the Management of which, there are generally speaking, four

424 *TRADE and COMMERCE.*

Sorts of People concerned, viz. Corn-factors, Meal-men, Malsters, and Carriers. The former, that is, the Corn-factors, travel over the whole Island, in order to make the best Bargains they can with the Farmers, and having their Correspondents in most of the Parts in the Kingdom, take their Measures for conveying the Corn they purchase to the Place of Embarkation, sometimes by Land, sometimes by Water-Carriage. The Meal-men are those that send up the Meal to *London* by Barges, from all the Counties bordering on the *Thames*, or on any navigable River running into the *Thames*; there are some also about *Chichester*, *Arundel*, and the Coasts of *Sussex* and *Hampshire*, who send Meal by Sea, who have Factors to sell it for them at *Queenhithe*, and other Markets. By this means the Millers in that Part of *England*, which is near the *Thames*, from being considered as a mean, low, and labouring kind of People, are grown to be Persons of Figure and Substance; so that upon some large Rivers near Town, there are Mills let for three or four hundred Pounds a Year. Malsters are, strictly speaking, Manufacturers, and therefore ought not to come under this Head; but we consider them in another light, that is, merely as Purchasers of Barley, a Commodity for which there are a Variety of Markets, such as *Kingston*, *Chertsey*, *Farnham*, *Windsor*, *Wickham*, *Reading*, *Wallingford*, *Abingdon*, where you might have seen formerly five hundred Waggon^s of Barley in the Market on a Day; but as this Trade has increased, the Markets have fallen off, which is owing to the Method of dealing by Samples; so that instead of sending his Waggon^s, a Farmer carries only a Handful of his Corn in a Money-bag; and whereas he formerly dealt only for the Quantity that came to Market, he now deals for his whole Stock at once, which is a Practice against Law, or rather against many Laws, for preventing ingrossing, regrating, or forestalling the Markets; and though without doubt it is highly beneficial to Individuals, yet it is a great Prejudice to the Public, as it is injurious to Market-Towns, hinders that Concourse of People and Horses, which a Market naturally draws, and is attended with other ill Consequences that I have not room to enumerate. As for the Carriers, their very Name shews their Occupations; and therefore we need say no more about them, except that their Number is great, and that the Method they take to subsist their Families, is at the same time highly beneficial to Society.

The

TRADE and COMMERCE. 425

The other Instance I propose to mention is Coals, and the Carriage in this Article is really an amazing Thing. Let us endeavour to set this in a clear Light. Coals at the Pit are commonly bought from two to four Shillings *per* Chaldron ; but by that Time they come to the Consumer, they frequently cost ten times that Money, which is entirely owing to Carriage. The *Newcastle* Coals, with the small Charges that attend bringing them to the Wharf, are sold there for five Shillings a Chaldron ; they are then shot from the Storehouse, which is called a Steath, into Lighters ; this is the first Loading ; from the Lighters they are thrown by Hand into the Ships, which is the second ; from the Ships they are delivered by Coal-Meters into Lighters at *London*, which is the third Loading ; from thence they are put on board Barges for all the Towns up the *Thames*, this is the fourth ; and to all Towns that do not stand immediately upon the River, they are carried in Waggon, which is the fifth Loading ; and in these Towns the common Price is fifty Shillings, from which if you deduct the Tax of five Shillings, it will appear that the Price of Carriage amounts to eight times that of the Commodity. It is the same thing with respect to other heavy Goods in Proportion ; the Cheese sent up from *Warwickshire* to *London* and *Sturbridge-Fair*, amounts to twenty thousand Tons *per Annum* at least ; of that kind of Cheese which passes under the Denomination of *Cheshire*, there comes thirty thousand Tons to *London* every Year ; and of *Suffolk* and *Cambridge* Butter, fifty thousand Firkins, of half a hundred Weight each. We cannot from these Facts form any Computation of what this Article of Carriage amounts to, but we may form a Notion of it ; we may from hence conceive that Multitudes are maintained by it, and that consequently it is of vast Advantage to Society.

As by Water-Carriage, Boat-Builders, Bargemen, Porters, and other People are maintained ; so for their Conveniency Numbers of Villages are built on the Sides of great Rivers, and by degrees many of these improve into good Towns. As for Land-Carriage again, Cart-wrights, Waggon-wrights, Wheel-wrights, Smiths, Harness-makers, &c. are supported by it in the first Instance ; in the next, it produces an excellent Breed of Horses, which are of vast Value ; to the same Cause also we owe our fine Roads, that are maintained at a great Expence and the making and repairing of which employ Thousands ; add to this Inns, Villages, where these Carriages bait, and the Market-Towns that form their respective Stations in long Journeys ; such as from *London* to *Exeter*, which

426 TRADE and COMMERCE.

which is one hundred and sixty Miles South-West; to *Edinburgh*, which is upwards of three hundred Miles directly North; to *Chester*, which is upwards of one hundred and fifty Miles North-West; and not to name more, to *Norwich* and *Yarmouth*, which is upwards of one hundred Miles to each North-East. Let us consider what a Number of Coaches, Pack-Horses, &c. are constantly and regularly employed to and from these Places the whole Year round; the Value of these Carriages and Cattle, the Wear and Tare of the one, the Losses that necessarily attend the other, the Number of Persons belonging to them, the Passengers that go with them, exclusive of Goods, their Expences on the Road; how much Towns decline by the changing of a Road; how soon they are raised, and how quickly they flourish from the same Accident in other Places. I say, let us meditate a little on all these Things, and we shall soon have an Idea of the prodigious Advantages that arise from the Domestic Trade of this Island; tho' after all, this is far from being considerable, when it comes to be compared with the Benefits resulting from our foreign Commerce, and yet they mutually assist and promote each other.

CHAP. V.

Of the British Manufactures; the Difference in working upon Native, Plantation, or Foreign Commodities; the Nature of our Manufactures briefly explained, and the Advantages arising from them clearly pointed out; together with some particular Instances examined more at large, that their Importance may the better, and more effectually appear.

THE Subject of Manufactures is one of the most difficult that can be undertaken, as well as one of the most curious, instructive, and important, if it could be fully and properly handled, which, so far as I know any thing, has not been hitherto attempted; an Account of it might be justly stiled the History of human Industry; but considering the extensive Learning, the Variety of Knowledge, and the prodigious Capacity that the Elucidation of so diffused a Topic would require, we can hardly expect it, much less in a Work like this, which is not a System of, but an Introduction to Science; and in which we propose only to lay down the first Elements

TRADE and COMMERCE. 427

Elements of Things, for the Information and Improvement of the opening Genius, which is always the most active, and the most vigorous, as well as the most inquisitive.

What therefore we have in view in this Chapter, is to give the Reader a tolerable Notion of the Value, Nature, and Consequences of Manufactures to this Country, and that in as concise a Manner as it is possible; so that he may entertain a tolerable Idea of the Difference between the State of a People active and industrious, and those that live either in an idle Plenty, from the Fertility of the Country in which they are settled; or who content themselves with little, that they may enjoy their natural or habitual Indolence, of both which there want not Instances in *Europe*. The Difference likewise between a People living and trading on the Produce of their Commodities only, and those who addict themselves to Manufactures which at different Times has been the Case of the People of *Great Britain*; to which we may add the Difference between such as barely manufacture their own Commodities, such as manufacture the Commodities of other Countries entirely, and such as employ themselves in the joint Manufacture of both; all of which are practical Cases, which when rightly understood, will contribute very much to the thorough understanding a Subject perplexed enough in itself, and which has been sometimes rendered more so, by being injudiciously treated.

It is an old and a very just Observation, that there is hardly a wider Difference between the human Species and Brutes, than between one Part of Mankind and another. In some Countries happily situated, where the Means of Subsistence are not difficult, the Inhabitants either take up with what they can find; or to a little Tillage, add an Application of a mixt Nature, that is compounded of Labour and Diversion, such as Hunting, and Fishing; and thus they pass their Days in a State of Nature, as some call it, or rather are with greater Propriety as we stile them, Savages. Some again sink still lower, and value themselves upon their nearer Approach to Brutality, pretending that it is the Vices only of Mankind that put them upon Labour and Invention; and that they may live very happily with a very small Share of either. The first is the Case of the *American Indians*, who cultivate a few Fields of Maiz, and supply the rest of their Necessities, either from the Woods, or from their Rivers and Lakes. The latter is the Practice of the *Hottentots*, who go clothed in Skins, eat the Flesh of Animals half raw, and lodge in Huts much inferior in Point of Elegance to Hogsties. It is commonly
imagined,

428 TRADE and COMMERCE.

imagined, that these People live thus because they know no better; but this is a Mistake, they really value themselves upon this Way of living, and persuade themselves that it is the best. Whether it be so or not, we shall be thoroughly enabled to judge, by considering the Figure that *New-England, Virginia, Pennsylvania, Maryland, and New-Jersey* make at this Day, in the Possession, and with the Improvements made by the *English*, compared with a State of those Countries when in the Hands of their original Proprietors; and the Condition of the *Dutch* Colony at the *Cape of Good Hope*, when brought into a Parallel with the State of the *Hottentots* before-mentioned, in the same Country. These duly weighed will enable us to make a general Discovery of the Advantages that attend on Industry, and teach us to set a just Value upon the Benefits that result from Arts and Sciences, when applied to the heightening and improving the Gifts of Nature, and thereby rendering the Condition of the human Race more comfortable, as well as more pleasant. We may also render these Notions stronger and more correct, by reflecting on the Condition of our own Country, when we had few or no Manufactures amongst us, when the Property of Lands belonged entirely to the Crown, the Nobility, and the Clergy, when the rest of the People were but Vassals, not Tenants, to these; and when the whole of our Trade consisted in exporting our natural Commodities. and that too by Foreigners, for the most part in foreign Bottoms. I say, we may strengthen our Notions by comparing this, which was really the State of our Ancestors, with that in which we live, when all Men are alike free, and when all who will apply their Time and Labour to right Purposes, may enjoy an independent, a comfortable, and a convenient Subsistence.

It is looked upon to be both a Credit and an Advantage to the *Dutch*, that they have very few Commodities of their own Growth; so that the Plenty they enjoy, and the Commerce they carry on, is purely the Effects of Industry; and it is very truly said, that they owe in a great measure the prodigious Quantity they have of Shipping, to their importing foreign Commodities, as well as exporting them when manufactured. There is a great deal of Truth in all this; and most of those Writers who are fond of magnifying the *Dutch*, have shewn a great deal of Eloquence in setting it in the fairest and strongest Light possible. But still there is one Light in which they have never considered it, and that is this. Their depending entirely upon foreign Commodities, places them in a State of great Insecurity; for either by their

TRADE and COMMERCE. 429

their being upon ill Terms with certain Nations, they may for a long time be deprived of the Materials they most want, or Things may take a new turn, and those Nations cease to deal with their old Customers, or in Process of Time these People may take it into their Heads to manufacture their own Commodities, in all which Cases they are subject to the most sensible Detriment, without having any effectual Remedy in their power; whereas we, who have a large Stock of valuable Commodities of our own; and if we found it at all necessary, might increase even these, can never fall into any such Difficulty, but are sure never to want sufficient Materials for our Home Manufactures, and which is still more, are equally as secure of obtaining from Abroad those Commodities which are most requisite for the Employment of our working People, by the Exchange of Commodities which our Neighbours cannot well be without, and of which, as I said before, it is impossible we should be deprived. Therefore, though at certain Seasons, the Commerce of the *Dutch* may flourish surprizingly, and extend itself vastly, yet they may be subject to such Reverses of Fortune, as cannot well happen to us.

We have endeavoured in the former Chapter to enumerate, at least, the principal Commodities which this Island produces, as also the chief of those that are imported from our own Colonies; but besides these, we have infinite Quantities from Abroad. At first sight, one would imagine that this could not be any other than Loss to this Country; and narrow Minds would be apt to argue, that if we could work upon our own Commodities, and vend them Abroad, we need not be at the Expence of working upon other People's Goods; and yet this is so far from having any thing in it of Sense, Reason, or sound Policy, that there is nothing seems so highly to our Advantage, as the manufacturing Commodities of foreign Growth, and that for this Reason; we, generally speaking, purchase them either with Goods of our own, that are incapable of being manufactured, such as Corn, Coals, Salt, &c. or with our own Manufactures that exceed our Home Consumption, the disposing of which is therefore so much clear Gains to the Nation, and the bartering it for Commodities infinitely more beneficial, than if we brought home the Produce in Gold and Silver; because, notwithstanding these are intrinsic Riches, and the acquiring them the ultimate View of all Industry and Commerce, yet the obtaining them, in this short manner, would add nothing to the Stock of the Nation, in comparison of what

430 TRADE and COMMERCE.

what is added to it by our taking off raw Commodities, working up these, and thereby employing a vast Number of Hands, after which, a very large Proportion of these Manufactures are again exported, many of them, perhaps, to the very same Countries out of which the raw Commodities they are made of, were originally brought. Thus the Reader clearly sees, what a prodigious Advantage accrues from adding to that national Stock which we have, and that acquired Stock which we derive from our Colonies, such an additional Stock from foreign Countries.

But a few Instances will make this much plainer, and at the same time make the Point we labour infinitely clearer than reasoning upon it ever so long; for example then. The Raw Silks we import from the *Levant*, the *East-Indies*, and *Italy*, are dyed, spun, thrown, and then wove into broad and narrow Silks, Ribbons, Galloons, Fringes, &c. and so become *English* Manufactures; Cotton, Cotton-Yarn, Hair, Grograms, &c. all used and manufactured here at Home, and in several sorts of Goods, chiefly Cottons, Fustians, Dimities, and *Manchester* Wares, losing their Species, and becoming *English* Manufactures, as the Silk; Kid-skins are all manufactured, and losing the very Name of their Kind, are sold in Gloves, and that only. Elephants Teeth, chiefly made into Combs and Toys, become a Manufacture of Ivory. Tin Plates are manufactured by the Tinmen into all sorts of Kitchen Utensils, Lanterns, Watering-Pots for Gardens, Canisters for Tea, Funnels for Chimneys, Speaking-Trumpets, and the like. Black-Latten is manufactured into all kind of Bras-Work, but especially Clock-Work, Movements for Watches, Wheels, &c. Clap-Board, Wainscots, and Staves, manufactured into Cabinet-Work, Wainscoting, and Cooperage for making of Casks. Hemp manufactured by the Rope-makers into all kind of Cordage, Cables, and Rigging for Ships. *Swedish* Iron and Copper manufactured into innumerable Cutlery, Foundery, and Armoury Wares, too many to dwell upon. Beaver Hair manufactured into Hats. *Spanish* Wool mingled with our own, and wrought into fine Broad Cloths and Druggets, called therefore *Spanish* Cloths and *Spanish* Druggets. All the Dye Stuffs used in their proper Places, for the dying all sorts of Goods which pass that Operation, to fit them for the Trade. Oil generally used in our Woollen Manufactures, and if not, then made up into Soap. Sulphur and Salt-Petre manufactured again into the dangerous Trade of making Gunpowder.

These,

These, as I said before, are but a few Instances out of many, but they are sufficient for my Purpose, as they very fully and unquestionably prove the Truth of what I have advanced, and serve as excellent Examples in support of this Doctrine, that we are more enriched by bringing home Commodities, than we should be by having our Returns in Bullion. They may also serve to prove what vast Advantages we draw from having such a Variety of valuable Commodities of our own, as not only to serve to furnish us with a multitude of Manufactures, but likewise procure us by Exchange, additional Materials from every Quarter of the Globe. Yet after all this, my Design will be but imperfectly executed, unless I can make my Reader comprehend of how trifling Value Commodities with all the Consequences that attend them in Point of Labour and Carriage are, when compared to Manufactures. It is this, which shews the Superiority of Art over Nature, or rather the amazing Improvement of the former on the latter. We will endeavour to explain this too in some measure by Facts. There is hardly any thing of so little Value in the World, which Industry, under the Direction of Art, cannot raise into Price. What is there in Nature so contemptible as the Kennel Dirt in our Streets? And yet this, under the Name of *Spanish*, is a necessary Material in making Bricks; and thus the Dirt, which the Scavenger removes as a Nuisance, comes back to the very Place in the Shape of an Ornament, and lays the Foundation of a Palace some Years afterwards, in the Streets out of which it was swept with Contempt. What is there so neglected, or despised, as Rags, unless it be the poor Wretches that are employed in picking them up? And yet even these get a Livelihood by that Employment, mean as it is. These Rags, when pick'd, sorted, and laid together, are preserved in Warehouses that pay a considerable Rent; they are conveyed from thence, either by Land or Water, at a considerable Expence for different Purposes, but all serve for some Purpose or other. Part indeed is converted into a kind of Manure, part is employed in making brown Paper, and part in making white; so that, as a polite Writer wittily observed, a Lady's Holland Shift when wore out, may have the Chance of returning to her in the Shape of a Billet-Doux. In former times, that is, a little before the Revolution, white Rags were sold for about three Pounds per Tun, but since that time, they have risen to ten Pounds per Tun; and according to a moderate Computation there are at least three thousand Tun collected annually within

432 *TRADE and COMMERCE.*

the Bills of Mortality, which wrought up into Paper amounts to a vast Sum of Money ; and yet this, in one Sense, may be said to arise almost out of nothing. That the Horns of Black Cattle are of some use every body knows, but that they may be applied to, and are actually the Foundation of several Manufactures, is what many People are not acquainted with. These Horns are first suffered to dry for two or three Months ; then they are cut into fit Lengths ; they are next held with a Pair of Pincers over a small Wood Fire till they become pliable ; next they are cut length-ways, and being turned open by a Man who holds a Pair of Pincers in each Hand, they are extended till they become almost flat, after which they are put between two hot Iron Plates rubbed with Grease, and so thrust into a Hole in the Earth, upon which they place a wooden Wedge ; this is beat with a Mallet, till by pressing the Iron Plates and remaining between them a considerable time, the Horn becomes perfectly smooth and flat. After this the Edges are pared, and the Horn Plates are sold to Comb-makers, Spectacle-makers, to such as make Tobacco-Boxes, Fan-Sticks, &c. As for Lantern Plates of Horns, they undergo a much longer Operation. Those who are employed in the first part of this Manufacture, are called *Horner*s, and of these there were above twenty in *London* fifty Years ago, and all of them in good Circumstances. The very Shavings are sold for various uses, at so much a Sack. The Spectacle-makers when they have cut out their Rings, sell the round Piece in the middle to the Turners to be nailed upon Mops. The Tops of the Horns are converted into a number of uses, such as the Hafts of Knives, Crutch-Stick Heads, Inkhorns ; and those that are not fit for Plates, are converted into Gunpowder-Horns, Drinking-Horns, Blowing-Horns, Shoeing-Horns, besides Spoons, Butter-Knives, &c. and the very Tips are used by the Bowyers, to make the Ends of their Bows. Thus we see the most contemptible Things in Nature, instead of being useless in the Hands of industrious People, are converted into a variety of uses ; and what we would imagine worth nothing, supplies Employment and Subsistence to a multitude of Families. Such in this sense, is the Worth of Manufacture !

As the Value of Commodities are wonderfully augmented by the Labour with which they are procured, and the expensive Carriage with which they are attended, so Manufactures are followed with both these Benefits, but more especially the former, in an infinitely greater degree. For
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in regard to Labour, Commodities general speaking employ but one Set of People; whereas Manufactures employ many, and thereby raise the Profits of Workmen to an amazing Height. As for instance, in Wool when spun into Yarn, and that Yarn manufactured into the finest kind of Stockings, of which some have been knit at *Aberdeen*, that have been sold for three Guineas a Pair, and have been so fine as to draw through a Gold Ring, whereby the Value of the Materials has been raised in the Proportion of one to one hundred and thirty; in like manner, Flax when manufactured first into Thread, and thence into Cambricks and Lace, is raised to above two hundred times its Value; and the same may be said of Iron refined into Steel, and that wrought into Watch Springs, and other Things of great Price. Of late Years, even the Cast Iron in the Backs of Stoves has been exalted to a most immense Price in comparison of the original Cost of the Materials; and if we remember, that all this Cost is in a great measure the Reward of Industry, and provides for the Subsistence of numberless Families, composed of many Individuals, all provided for, and in their several Degrees well provided for too, we shall find, that Manufacture is a most noble Instrument towards procuring the Welfare and Happiness of a People, and in that light deserves the strictest Attention, the greatest Encouragement, and the utmost Indulgence from every well-regulated Government.

But to put this matter at once into a full light, and in as narrow a Compass as possible, let us take a short View of the Woollen Manufactory, as it is managed by us. In the first place the Commodities from whence it arises, are principally two, Wool and Oil. The latter is chiefly furnished to us from abroad, from *Spain* and *Portugal* in small Quantities, but the gross of it from the Kingdom of *Naples*; the former likewise comes from different Parts, as from *Ireland*, *Spain*, *Barbary* and *Turkey*, but the main Article is *English* Wool, which is the Substance of the whole Manufacture, and therefore upon this we shall chiefly insist, and trace it as far as our Intelligence reaches, from the Back of the Sheep to the Merchant's Warehouse, which we shall find a most extensive Circle.

The Wool is taken from the Sheep's Back by the Shearer while the Creature is living, or by the Fellmonger from the Skin after it is dead. It is then sold to the Dealer or Woolstapler, a very substantial kind of Tradesman, of which there are many reside in *Southwark*, and Numbers

434 TRADE and COMMERCE.

in different Counties of *England*, such as *Dorsetshire*, *Norfolk*, *Lincolnshire*, and *Leicestershire*. Wool is also carried sometimes to great Fairs and Markets, such as *Sturbridge* Fair particularly, and sometimes without going into any Dealer's Hands, it passes at once from the Farmer, or the Fellmonger, to the Manufacturer. The first Operations it goes through with him are Combing and Carding. The Combers are a particular Set of People, and a distinct Trade; but as for Carding, it is a Task performed by such as are hired by the Clothier for that purpose. After Combing and Carding comes Spinning, and this again is a particular Trade, infomuch, that whole Counties are employed therein, the Inhabitants of which hardly ever see any raw Wool, and as seldom any that is manufactured.

To conceive this clearly, we must inform the Reader, that the Weavers of *Norwich*, besides employing most of the Inhabitants of the populous Counties of *Norfolk* and *Suffolk*, send their Wool to be spun into *Cambridgeshire*, *Bedfordshire*, and *Hertfordshire*, and as to the Wool itself, it comes from *Lincolnshire*. On the other hand, the Weavers in *Spital-fields*, besides the three Counties last mentioned, send a great Part of their Wool by Land Carriage one hundred and fifty Miles to *Westmoreland*, and when it is spun, receive it back the same way. In the County of *Essex*, they are chiefly supplied with Wool from *London* and *Southwark*, and as it is manufactured in the great Towns, so it is spun in the Villages; and to this Trade probably we ought to impute the great Number of People, which were it not for the Advantages derived from the making Bays and Perpetuanas, would hardly inhabit there, because they would scarce find a Subsistence. The *Western* Parts of *England* make still a superior Figure in this way, for the Plains in *Dorsetshire*, *Wiltshire*, *Gloucestershire*, *Somersetshire*, and *Hampshire*, are in a manner covered with Sheep, infomuch, that the People of *Dorchester* affirm, that there are always six hundred thousand feeding within six Miles of that Town, yet the Manufacture demands more Wool than all these Sheep can furnish, infomuch that they commonly take thirty thousand Packs from *Ireland*, and very near as much Yarn ready spun; tho' it has been computed, that in those five Counties, there are above one hundred thousand Families maintained by spinning, reckoning six Hands to a Family, exclusive of a Weaver in each, and in many two or three.

In the middle Part of *England*, that is, in the three Counties of *Leicester*, *Northampton* and *Warwick*, the Wool, as well

TRADE and COMMERCE. 435

well as that in *Lincolnshire*, supplies the *London* Consumption at the Rate as is generally supposed of five hundred Packs a Week, and the poor People in all these Counties are employed in Spinning; nor are there, as we observed before, People enough to convert all this Wool into Yarn. But after all, there is yet another considerable Branch of this Manufacture in the North, whither Part of the *Leicestershire* Wool is carried, which with the Wool of the East-Riding of *Yorkshire*, and that from *Durham*, more especially the Banks of the River *Tees*, are accounted the fine Wools of those Parts; and the last-mentioned Sheep are the very largest in this Kingdom. The coarser Wools from *Scotland*, *Lancashire*, *Westmoreland*, and *Cumberland*, have their Uses also; and though they do not enter into the Composition of fine Cloths, yet they make many other Things that produce a good Price, and find always a constant and Ready-money Market. Thus it appears how truly the Woollen Manufacture is esteemed the great Staple of *England*; and this will be still more apparent from the following Account of the particular Species of Woollen Manufactures, and the Places where they are chiefly made.

Broad Cloths mixed or medley, are the Manufacture of *Wiltshire*, *Somersetshire*, *Worcestershire*, *Kent*, *Surry*, and *Devonshire*. Plain white Cloths for Dying, are made at *Salisbury*, *Shrewsbury*, *Worcester*, *Cirencester*, and all over *Gloucestershire*; narrow Woollen Cloths mixed, commonly called Dozens, are made at *Leeds*, *Wakefield*, *Bradfield*, and *Huthersfield*, in the West-Riding of *Yorkshire*. Druggets, Du-roys, &c. are made in the Counties of *Berks*, *Somerset*, an *Wilt*; Serge and light Stuffs at *Norwich*, *Norfolk*, *Spitalfields*, *Bristol*, and *Darlington*. Rugs, Chair-coverings, Pen-nistons, half Thicks, Duffels, &c. are the Manufacture of *Cumberland*, *Lancashire*, and *Westmoreland*. Blankets are made in *Oxfordshire*, and *Wales*; Flannels in *Salisbury*, *Shrewsbury*, in many Places of *Wales*, of which *Wrexham* is the great Market. Tammies, and a variety of other Things at *Coventry*. Vast Variety of lesser Wares at *Manchester*. Stockings of all Sorts are wove in *Leicestershire*, *Derbyshire*, *Warwickshire*, *Nottinghamshire*, and *Spital-fields*. The best knit Hose come from *Gloucestershire*, *Yorkshire*, *Worcestershire*, *Somersetshire*, and *Wales*; and the very best from *Northampton* and *Aberdeen*. Kerseys, or coarse Cloths, are made at *Bradford*, *Rochdale*, *Halifax* in *Yorkshire*, and at *Guildford*, and of a particular Kind in *Devonshire*, and *Somersetshire*; Shalloons in *Northamptonshire*, *Berkshire*, *Somersetshire*, *Wilt-*

436 *TRADE and COMMERCE.*

Wiltshire, Hampshire, and the West-Riding of Yorkshire. Fingrums at *Edinburgh and Stirling.* Coarse Stuffs at *Musleborough.* Bays of all kinds at *Colchester, Bocking, Braintree, Witbam, and Coggeshall,* and in short all over *Essex,* as also at *Manchester.* Says were formerly the great Manufacture of *Colchester,* but now they are made at *Sudbury in Suffolk.* Perpetuanas or long Ells at *Tiverton,* and all over *Devonshire,* at *Sudbury in Suffolk,* and at *Colchester in Essex.* Frizes are made at *Worcester,* and in *Ireland;* fine Plaids at *Coventry,* but chiefly in *Scotland;* Linsey-woolsey Stuffs for Hangings and Printing at *Kidderminster;* Seamen's high-crown Caps, called *Mormsuth* Caps, at *Bewdley in Worcesterhire.*

It would require a large Volume to run through even our capital Manufactures in the same manner; and therefore we will content ourselves with a very brief Account of the Uses to which our Metals are converted, without pretending to assign the Places where these Manufactures are carried on. Iron is cast into Cannon and small Arms, Bombs, and Hand-Granades, Shells, Chimney-Backs, Boiling-Pots, Pipes for Water, Furnaces of various kinds, Iron Plates, Bars and Retorts. Forged Iron is wrought into *Sheffield and Birmingham* Ware, such as edged Tools, Knives and Scissars, Cutlery Ware and Toys, Nails, Hinges, Hooks, Spikes, Locks and Keys of many Sorts, for great Grates, House-Doors, Horse-Locks, Field-Locks, Padlocks, Fetters, Gun-Locks, Razors, Surgeons Instruments, Clothiers-Sheers, and smaller Sheers. Hammer'd Iron is wrought into Chains for Horse-Harness, and for mooring of Ships Anchors, Crows, and Tiers for Wheels, Iron Ballisters, Rails, Pallisades, Gratings, &c. Bar-Iron of various Kinds, &c. Mill'd Iron is converted into Iron Hoops, and all kinds of split and flatted Work, as well as Wire of all Sorts.

Brass and Copper when cast, make Statues, or Images. That Sort commonly called Battery, serves for Pots, Saucepans, Kettles, and seems to be so called, because it is afterwards hammered. Black Latten is Metal prepared for Clock work, Jacks, Engines. In Foundery-Ware again, it serves for Brass Cannon, and Mortars, &c. Bells of all kinds, Pipes for Engines, Wheel and Mill-work, Brass Buttons, a vast Variety of Toys, and for the Use of Coachmakers and Upholsterers. When wrought and hammered, these Metals are employed in Clock-work, Jack-work, Watch and Mill-work, polished Plates, and Toys innumerable.

Lead is cast into Pigs and Sows for Exportation. Sheet Lead, whether milled or cast, serves for covering of Buildings,

TRADE and COMMERCE. 437

ings, Sheathing of Ships, Lining of Coffins, for Cisterns, Basons, Fountains, and a thousand other Uses. Lead is also cast into Statues and Images, and into Pipes for conveying Water; as also into Bullets and small Shot. Moulds are made of it for all kind of Earthen Ware, and the Litharge of Lead serves to glaze them. When calcin'd it comes into the Painter's Hands, who uses it for Colours; and besides all these Uses it serves to mix with other Metals by way of Alloy. It may not be amiss to remark, that we have prodigious Quantities of this Metal, more I believe it may be truly said within the Compass of this Island, than any other Country in *Europe*; and considering the vast Demand for it, and for every thing that is made of it, we may fairly affirm, that it is no inconsiderable Source of our Riches; and at the same time it must be an additional Pleasure to reflect that it is a growing and constant Treasure, which notwithstanding the prodigious Quantities that are annually employed, there is no Danger that we should ever exhaust our Stores.

Tin is cast into Blocks for Exportation, converted into Pewter, and wrought into Dishes, Plates, Pots, Spoons, and a prodigious Number of small Things which we need not enumerate. It is also used for making Moulds, and as a Solder for joining and cementing other Metals; and of this too, both as a Commodity and a Manufacture, we are possessed though not of a Monopoly, yet of a very large, settled, and constant Trade, out of which there is no great Danger of our being beaten by any other Nation; which however ought to be no Reason for our being less attentive to, or less assiduous about this Trade than our Ancestors were, who considered it as one of the chief Fountains of their Riches, though the principal Advantages they received arose from it as a Commodity; whereas we are equally Gainers by its being a valuable Commodity, and the Material of a beneficial Manufacture. One Instance more, and we will have done; the Glass Manufacture in this Country is, or at least was, a very great one; it stands naturally divided into three different Sorts. The first is what we call fine Flint Glass, of which are made all Sorts of Drinking-Glasses, Cruets, Salt-sellers, Mugs, Salvers, and Apothecaries and Chymists Phials, Retorts, &c. fine Bottles for Cases, Decanters, Beakers, Plates and Dishes, &c. Sconces, Branches and small Ware, Toys, &c. as also Watch-Glasses, Tubes, Spectacle-Glasses, and those for Microscopes, Telescopes, &c. These are, or at least were made at *London, Bristol, Stourbridge, Nottingham, Sheffield, and Newcastle*. The second Sort is Plate-Glass, of which are

438 *TRADE and COMMERCE.*

made Looking-Glasses, Coach-Glasses, Cabinet-Glasses ; it is used in framing large Pictures, and sometimes, tho' rarely, in Sashes. This was only made at *London*. Crown-Glass, formerly called *Normandy* Glass, for Windows, Sashes, Pictures, &c. ordinary Glass for small Panes, commonly called Quarrels, &c. at *Bristol*, *Stourbridge*, *Newcastle*, and *London*. The third Sort of Glass is from its Colour stiled Green-Glass, tho' the least valuable in its Nature, yet from the Variety of its Uses and vast Consumption, of no less Consequence than the two former Sorts. This was divided into several Branches, such as Bottles made at *London*, and at *Leith* in *Scotland*, Phials at *Bristol*, Retorts at *Gloucester*, Cucumber and Melon-Glasses at *Stourbridge* and *Newcastle*.

To be convinced of the prodigious Benefits resulting from every kind of Manufacture, we need only make a Journey into any of the Counties where they flourish, and look about us ; where we shall observe the Market-Towns thick, and yet large, well built, populous and rich, and Villages within a Mile or two of each other ; as for Instance, for twenty Miles round *Exeter* in *Devonshire* ; in the Neighbourhood of the manufacturing City of *Norwich* in *Norfolk*, where the Stuff-Weaving is carried on ; in *Essex*, where the Bays-Trade flourishes ; in *Wiltshire*, from *Warminster* to *Malmesbury*, in the Counties of *Gloucester* and *Worcester*, where the white Cloathing Trade is the grand Manufacture. But that we may not suppose, as one would imagine by their Discourse many People do, that the Woollen Manufactory alone produces these Miracles ; let us consider the Counties of *Warwick* and *Stafford*, and more especially round the Town of *Birmingham*, where the Hard-Ware and Cutlery Manufacturies flourish. Or let us inquire into the State of *Yorkshire* and *Lancashire*, and the Face of things about *Manchester*, *Sheffield*, *Leeds*, &c. where there is a mix'd Variety of several Manufactures, such as Cotton, Iron, narrow Cloths, Kerseys, &c. carried on ; we shall soon see that Industry in any kind, will produce every where the same Effects ; and that if Men are but busy and careful, it matters not much what they are about, or what kind of Trade they pursue, a competent Reward for their Labour, constant Employment, and a comfortable Subsistence are never wanting ; and what is in itself also of very great Consequence, the Spirit of Industry is sure to prevail ; Example governs all Ranks, and good Habits, if I may be allowed the Expression, are contagious as well as bad. Let but one or two Towns thrive

TRADE and COMMERCE. 439

thrive by any Manufacture, in the Space of fifty Years you find it spread through the whole Country.

But for a single Instance, more narrowly examined, which strikes some Minds more than any of these extensive Views. There is the Town of *Halifax*, which has nothing extraordinary to boast in point of Situation, and for the Country round it, it is far enough from being a Paradise. The Place indeed might boast of Antiquity ; for we learn from Records, that about three hundred Years ago, there were no less than thirty Houses in it, and the Number of People were somewhat under two hundred ; those in the Parish, which by the way is a very large one, near twelve Miles in Circumference, were then computed at seven hundred Souls ; but from the establishing of the Woollen Manufactory, the Vicarage of *Halifax*, for such it still remains, is the most considerable in this Island, and perhaps it would not be easy to match it Abroad. It is not easy to know what to call it, whether Village, Borough, Town, or City ; for the Houses are spread every where almost over the whole Parish, and yet every House seems to depend solely upon itself, for each has its Tenter-ground with Cloth, Shalloon, or Kersey in it ; all the Men are busy either at their Looms, in their Grounds, or at the Dye-fats. None of the Women are idle, nor even the Girls and Boys ; for Carding, Spinning, and Winding, employs them all. It has been computed that no less than one hundred thousand Pieces of Shalloon have for some time past, been made here every Year. As to the Number of People, here are threescore thousand Communicants in this Parish, for whose Conveniency there are sixteen Chapels of Ease, and about fifteen Meeting-houses. Such are the Effects of that Industry which is supported by Commerce ; such is the Difference between the present and the past Times ; such the Alteration that has been made by that Spirit which we endeavour to celebrate !

Yet as I said before, *Halifax* is but a single Instance, and it would be a very easy Matter to send the Reader to at least half a Score other Places upon the same Errand. We will try what can be done in a Breath ; there is *Manchester*, *Warrington*, *Macclesfield*, *Leeds*, *Wakefield*, *Sheffield*, *Birmingham*, *Froome*, *Taunton*, and *Tiverton*, several of which are no Corporations ; but the greatest Man in point of Authority is a Constable, and yet in respect to Inhabitants, they may severally vie with the City of *York* for Number, and at the same time it may be truly said, that they are every Day augmenting ; whereas I am afraid that City is rather declin-

440 *TRADE and COMMERCE.*

ing. This is rather more than sufficient to satisfy an opening Mind, as to the Truth of all that we have advanced upon this curious and copious Subject, to clear his Breast from Prejudices, and to fix in his Memory a just Respect for Trade, by convincing him that it is the only effectual Means of banishing Idleness, Indigence, and ill Humours; for if Men are busy, they can never be in Want; and if they have any Genius or Parts, they must acquire an independent Settlement; now Property is the Mother of Peace, and those only grumble, mutiny, and rebel, that have not wherewithal to live; such as have, know that it is their Interest to be quiet.

CHAP. VI.

Of the British Fisheries, as well that of Newfoundland, as those on the East and West Coasts of England, and of Scotland; with some Hints also of the Branches that have been lost, and of the Improvements which might be admitted, in those we still possess.

THE Advantages which attend a Fishery large in Extent, and well established, are not only many and great, but at the same time very obvious and apparent. We may consider the Sea as a Mine, out of which the Fish are taken with very little Expence, and even that Expence is advantageous, since it promotes several Manufactures, and goes entirely amongst our own People. The Fish when taken, are a Commodity of great Value; for either they become Part of our Home Consumption, and by that means save us a great deal of Money; or otherwise they are exported, and in that case they are a kind of hidden Treasure; for what costs us nothing but Labour, is either disposed of for Money, or for Commodities of foreign Growth, which must otherwise be paid for in Money. It is indeed true, that the *Dutch* have carried this Point much farther than we; though I think there is good Reason to doubt the Truth of some of the prodigious Calculations which several of our Countrymen have published upon this Subject; notwithstanding the Pensionary *John de Witt* has thought fit to insert them in his celebrated Work, the End of which considered, he cannot be blamed for giving them place, even supposing that he did not believe them, which I think is more than probable, from the manner in which

TRADE and COMMERCE. 441

which he speaks of them. His Business was to excite the Care of his Countrymen in regard to the Fishery; and therefore it is no Wonder, that he was willing to allow it all the Advantages possible.

But whatever Advantages the *Dutch* may have over us in this respect, it does not at all follow from thence, that either we have entirely neglected our Fisheries, or that our Acquisitions from them are inconsiderable. Some Writers, indeed, carried away by the wonderful Reports above-mentioned, have given strongly into this Error, and represented us not only as very careless and deficient, but even as stupid and indolent to the last degree in an Affair of such Consequence. According to them, we sit still with our Arms before us, notwithstanding we see, before our Eyes, the *Dutch* making more of the Fishery in our Seas, than the *Spaniards* of their *West-Indies*. On the other hand, there are some, who in the Accounts they give us of the *Scotch* Fisheries, speak in such a manner, as might tempt us to believe, that instead of the *Dutch* exceeding us, we very much exceed them in this very Article, which, however, is certainly false, but not more so, than the former Supposition, and therefore both are to be guarded against. The Truth of the Matter is, and indeed *de Witt* acknowledges it, Necessity put the *Dutch* upon their Fisheries, and the vast Gain they brought in, sufficiently encouraged them to pursue, as they have done, Methods entirely suitable to their Situation, Genius, and way of Living, and at the same time lucrative in the highest degree.

The middle Way therefore in this, as in most other Things of a like Nature, is the best; and without running down our Countrymen in an extravagant manner, or crying up their Industry beyond what it deserves, we will endeavour to state Things fairly, and agreeable to Truth. The Herring Fishery in *Scotland* is certainly very considerable; some have computed it in the whole, that is, on the West as well as on the East Side, at sixty thousand Lafts one with another; but I am afraid there is an Error in this, because, from my own Acquaintance with the Subject under our Consideration, I have very good reason to believe that the *Dutch* themselves think it a very good Year, when they are able to make sixty thousand Lafts. It is however highly possible, that the Mistake arose by some curious Person's inquiring into this Matter, who was not acquainted with the Terms of Art, and might very possibly mistake Barrels for Lafts. A Barrel of Herrings is the tenth Part of a Laft; and according

442 TRADE and COMMERCE.

cording to the best Accounts that can be had of this Fishery, I believe that six thousand Lasts, or if a larger Number pleases the Ear better, sixty thousand Barrels, may be a pretty just Calculation of the annual Product of the Herring Fishery in *North Britain*. And a very considerable thing this is, though nothing in comparison of the *British* Fishery, established by Act of Parliament, since this Work was first published.

The Herring Fishery in *England*, is chiefly carried on at *Yarmouth* and *Leostoff*; but this is for a very different Purpose, the Herring being dry cured, and becoming what we call Red Herring; but however it is very considerable, and amounts in the best Years to four thousand Lasts of Herrings, and in some to five thousand, which are exported to *Holland*, *France*, *Spain*, and *Italy*. As for the remaining Part of the Herring Fishery at the Mouth of the River *Thames*, it supplies, as I conceive, the *London* Market and Home Consumption; neither is it in this respect contemptible, though in a manner nothing when compared to the other Fisheries before mentioned.

We must next take notice of the West Country Fishery on the Coasts of *Dorsetshire* and *Devonshire*, and sometimes also on those of *Cornwall*, for what are called Pilchards. There are many People who consider these as a kind of Herring, and perhaps they are not mistaken; but if they are so, they are a particular kind of Herrings, and are very much esteemed Abroad, so that there is hardly any Commodity comes to a better Market, more especially in *Spain*, where the People keep many Fasts, and are remarkably fond of Fish that are well cured, and of a high Flavour, as the Pilchard must be allowed to be. It is thought that one Year with another, the Exportation of Pilchards amounts to a thousand Lasts, or ten thousand Barrels, and I believe this Computation is rather below than beyond the Truth.

At the same Season of the Year that this Pilchard Fishing is carried on in the *British* Channel, there is a Herring Fishery of about the same Value, which employs the People on the opposite Coast, I mean in the *Bristol* Channel about *Biddiford* and *Barnstaple*. Thus we have entirely surrounded *Britain*, and examined the Nature and Value of this kind of Fishery on all Sides, which, upon the whole, cannot be fairly carried much higher than fifteen thousand Lasts, unless we take in the *Irish* Fishery, in which the Merchants about *Belfast* and *Londonderry* are said to have a considerable Interest; and the *Mancks* Fishery, or Herring Fishery on the Coast of
the

TRADE and COMMERCE. 443

the Use of *Man*, which has been sometimes of Consequence, and at others of none at all; but when they are all modestly computed, and added together, there seems to be no just Reason to think, that they can much exceed, if indeed they come up to twenty thousand Lasts a Year; neither, all Things considered, is this any disparaging Account of our old Herring and Pilchard Fishery.

We are next to consider what is called the White Fishery; and in the first place it is to be observed, we take considerable Quantities of Cod in the North Seas, and from thence it is called North Sea Cod, of which large Quantities are sold to the Fishmongers here in *London*; and it is vended also in most of our Sea Ports, serving for Provisions in short Voyages, as well as for Consumption on Shore; so that though this Fishery does not bring us any great Sums of Money, yet it saves much, and is consequently in this light very beneficial. There is a Fishery of the same kind in *North Britain*, chiefly about *Dunbar*, and it serves to subsist a good Number of People, and in other respects turns to the same account as the former. But the *North British* Fishery on the West Side, and among the *Orkney* Islands, is a Thing of greater Consequence, into which, of late Years, the *Irish* are fallen, and before the War with *Spain*, they carried on a very considerable Trade thither; but neither is this so advantageous as it might be, or at least was not before the Legislature thought fit to erect the Company before mentioned. But after all, the principal White Fishery, is that for Cod in *Newfoundland*, and the same all along the North Coast of *New England*, which is of prodigious Importance. It employs many thousand People at Sea and on Shore. it increases our Shipping, it procures a large Sale for our Manufactures, and besides all this, the Produce of it is very large, not less some Years ago, when a very exact Computation was made of it, than two hundred and thirty thousand Quintals, which were disposed of in *Spain* and *Portugal*, as also in *Italy*, more especially at *Leghorn*, and at the *Canaries*, *Madeira*, and *Cape de Verd* Islands, not to mention what is consumed in our own Colonies.

There are besides these, several other Fisheries that deserve Notice; such as the Whale Fishery on the Coast of *Long Island*, *Rhode Island*, and *New-York*, but this is not a little uncertain, and the taking of what are called *Sperma Ceti* Whales, among the Islands of *Bermudas*, much more so. We were once entirely possessed of the *Greenland* Whale

444 TRADE and COMMERCE.

Fishery, and for many Years had the most considerable Share in it, till gradually beat out of it by the *Dutch*, from whom we are now in a fair Way of recovering it. Our Salmon Fishery is carried on in *North Britain* at *Aberdeen*, in *South Britain* at *Berwick*, and in several Places in *Ireland*. There is also a considerable Fishery carried on in the Rivers in the Island of *Newfoundland*, which was said to be increasing before the late War broke out, and one would imagine must by this time be grown very considerable. Upon the whole, it may be truly affirmed, that if the *Dutch* go much beyond us in the Herring Fishery, we also very much exceed them in the White Fishery; in the *Greenland* they had almost all, and it is still nearly the Case with respect to the *Iceland* Fishery, which was also once in our Hands, if we had known how to keep it. I believe it may be true, that while we lose on one Side, we get on another; but this is no reason why we should neglect the regaining of lost Trades, and more especially Fisheries; and those Fisheries particularly which lie nearest our own Coasts, for these would infallibly furnish us with a constant Supply of experienced, active, and healthy Sailors, that might upon any Emergency be employed in manning our Navy, and by reasonable Encouragements, might be brought to become so useful in that respect, as to render needless the oppressive and illegal Practice of taking Men by Force.

Besides, when it is remembered, that taking and curing Fish is so much a shorter Thing than digging for and melting Ore, and at the same time in point of Nets, Vessels, People, Salt, and Casks, not at all less expensive; so that we come sooner to Market, and yet find as good a Price for this Commodity, as for any Metal or Mineral we have; it ought to be considered as a great and constant Source of Riches, and which is still more to our Purpose, an inexhaustible Source; for the more we have, the more we are like to have; by which I mean, that there is no Danger of extending our Fisheries too far. The greater they grow, the better our Fish will be cured, the more People and the more Vessels will be employed, not in the catching, but in the exporting them; and at the same time this would add to our naval Force, which I mention again, as having a particular Connection with this Subject; for without a naval Force, such an extensive Fishery as we might have, could not be protected; whereas the gradual Increase of this natural Advantage, inseparably annexed to our Situation as an Island, would very soon increase that Force to such a degree, as might withstand all *Europe*; so that the
Project

TRADE and COMMERCE. 445

Project formed in the Reign of King *Charles I.* of establishing a Herring-Fishery on the Coast of *Scotland*, out of the Profits of which, a constant Squadron of Men of War was to be maintained, does not appear to have been ill founded; but we stand in need of no such Projects now; for if our Fishery be improved, which is in our Power, and the Exportation increased, which would follow of course, this would augment the Balance of Trade, and the better enable the Nation to keep in constant Employment an invincible Navy, a Thing equally suitable to her Interest, and to her Glory.

C H A P. VII.

Of our Plantations, the Nature and Benefit of them explained; their great Importance to this Country demonstrated; the vast Change they have made in our Affairs stated and accounted for; and all Objections against them answered.

There is hardly any Subject that better deserves a young Man's Attention than this, whether we consider the Importance thereof in itself, and the Advantages that arise from thoroughly understanding it, or the Dangers that attend falling into those vulgar Errors with which Multitudes are infected, and are commonly labouring by their Discourse to infect others. When we hear such as have either resided long in our Colonies, or have considerable Interests in them, extolling the Benefits derived from them to *Great Britain*, and insisting that a reciprocal Regard is consequently due, we must be quite at a loss in our Judgments, in case we have no previous Conception of the Matters on which they insist; and on the other hand, when we see not only the Populace, but even People of better Figure expressing a Coldness, and want of Kindness, if not Disdain and Contempt for their Countrymen in those Parts, as if their Interests were as far removed from them as their Persons, we are in danger of being carried away by the Stream, and falling imperceptibly into a Mistake, out of which it is a great Chance if ever we recover. I had Reason therefore to say, that

446 *TRADE and COMMERCE.*

that it very much imports a young Man to acquire right Notions upon this Head early, and these too establish'd upon sound and solid Principles, that he may stand secure, and not have his Opinion shaken by any witty Declamations, or sophistical Arguments that are sometimes used to the Discredit of all, but very frequently employed to ensnare and mislead us with respect to particular Plantations.

It would be no very difficult Matter to shew from Reason alone, that Plantations are highly beneficial, and that nothing can contribute more to the Riches and Welfare of any Country, or at least of any trading Country, than fixing Settlements in foreign Parts, and more especially in such a Country as *America*, where vast Regions may be obtained merely by establishing Colonies in them. But there is no need of doing this, since Experience affords us a shorter and easier Method. There is no Instance of any great trading Nation ancient or modern, that ever had this in their Power and neglected it; from whence we may infer, that what has been always and every where judged reasonable, must really be so. Besides, let us consider what rendered the *Portuguese* heretofore rich and powerful, and what in some measure keeps them so still, is it not their Plantations? If we asked the same Question with regard to *Spain*, we must receive the same Answer; and yet there it nothing more certain, than that both these Nations are under vast Inconveniencies with respect to their Plantations; for they draw nothing from them but in Satisfaction for Commodities and Manufactures, and yet the far greatest Part, indeed almost all these Commodities and Manufactures they purchase themselves from other Nations; notwithstanding which prodigious Obstacle, it is apparent, that their Plantations are not only the great and constant, but almost the sole Source of their Riches. This alone to a Man of Sense and Reflection, will afford a full Conviction of the Truth of what has been advanced, as to the Benefit of Plantations in general.

There is no shorter Method with respect to our own in particular, than to consider one that has some staple Commodity, which may serve as a Model for the rest; and I know of none that can answer this Purpose so well as *Virginia*, one of the oldest, best cultivated, and most populous of our Colonies upon the Continent. It is computed that the Number of Souls indiscriminately may amount in *Virginia* to about half a Million, and of these about one hundred and twenty thousand Men, Women, and Children, may be white, which shews this Colony is in itself a thing of prodigious Importance;

TRADE and COMMERCE. 447

portance; the next thing is to find out what Advantages this Country derives from such a Number of its Subjects dwelling there. In the first place, it must be observed, that as the Value of Labour differs in several Parts of this Kingdom, so the Labour of a Man in most of the Plantations, is not only as advantageous to his native Country as if he worked at home, but much more so: I believe, upon a moderate Computation, we may reckon, that such a Person contributes to the public Stock, by which I mean the Income and Wealth of the *British* Nation, four times as much. So that we may with reason reckon, that the white People in *Virginia*, one with another, produce twelve Pounds to this Nation; the reason of which will appear, when we consider the Nature of their Commerce more particularly. But besides this, the Negroes are of great Advantage to this Kingdom, though of infinitely less than white People would be, if they were employed in the same Work; for every one of these poor Creatures consumes yearly two Hilling-hoes, two Weeding-hoes, two Grubbing-hoes, besides Axes, Saws, Wimbles, Nails, and other Iron Tools and Materials. On the whole, there can be no sort of Question, because it appears a plain Matter of Fact, that these People necessarily take off the Sum of one hundred and fifty thousand Pounds in the Commodities of this Country.

I have before stated (agreeable to what able Authors have asserted upon this Subject) some general Principles of Computation, such as that every Head in this Plantation may be reckoned worth twelve Pounds a Year to the Nation, which must seem prodigious; and indeed so does every thing grounded on Calculation, to such as have not applied themselves thereto; and so they always will, unless clearly explained, which is what I shall next attempt, as desiring to inculcate useful Truths capable of influencing Men's Practice, and not write paradoxical Discourses for my own and other People's Amusement. In order to untie these Knots, we must consider, that the People in this Colony of *Virginia* live exactly as we do, or rather more freely in that generous, open, hospitable, and consequently expensive Method that prevailed here in the last Age. But as they are supplied both with Necessaries and Conveniencies, with the Instruments of Labour, as well as the Means of Luxury, from *England*, it follows of course, that they must employ an infinite Number of Hands to provide these. For it is generally known, that these Demands must be supplied from those Handicrafts and Mechanics that have most Hands in
their

448 *TRADE and COMMERCE.*

their Service, such as Weavers, Shoemakers, Hatters, Iron-mongers, Turners, Joiners, Taylors, Cutlers, Smiths, Bakers, Brewers, Ropemakers, Holiers, and indeed all the Mechanics in *England*, their Manufactures being good Merchandize in *Virginia*. These Commodities sent thither, besides Linen, Silks, *India* Goods, Wine, and other foreign Manufactures, are, Cloth, coarse and fine Serges, Stuffs, Bays, Hats, and all Sorts of Haberdashers Ware; Hoes, Bills, Axes, Nails, Adzes, and other Iron Ware; Cloaths ready made, Knives, Bisket, Flour, Stockings, Shoes, Caps for Servants, and in short, every thing that is made in *England*.

But if they employ these People, they must feed them likewise, and pay them their Wages, and not only them, but those who take the Pains to go between the Planters and these Workmen; by which I mean the Agents, Merchants, or Factors, who tho' fewer in Number, yet have their Servants and Dependents, who from the Nature of their Employments, expect to be paid at a better Rate. Neither is this all; for when Things are made and brought to the Factor, they are never the nearer to the Planter in *Virginia*, but must be put into the Hands of a new Set of People, who are to be paid for the Carriage of them. So that now I think the most common Capacity may understand how the Labour of every Head in any Plantation, must be worth four times as much to the Community of his Mother-Country, as if he wrought at Home; for if he spends so much, and pays for what he has, both of which are undeniable, his Labour must produce so much. This shews the Benefit of Plantations to their Mother Country; and I hope there is no need to say, that this shews how much Regard and Respect is due from those who manage the Affairs of the Mother-Country, to those who live and labour for her in the Plantations. But because it is not impossible we may err a little in the Measure of these Computations, and as I am far from desiring to magnify these Advantages beyond the Truth, I shall lay it down as a Thing certainly to be depended upon, that every white Person in *Virginia*, one with another, is worth to this Nation ten Pounds, which will make the Value of the whole Plantation equal to an Annuity of 1,200,000*l.* to *Great Britain*.

This, I think, is already in a great measure demonstrated; but as I am very sensible that many People will still think, full Satisfaction is not given upon this Head, if they are not shewn how this, or at least the greatest Part of it is received, that we may not do Things by Halves, my next Care shall
be



TRADE and COMMERCE. 449

be to remove this Difficulty likewise. In order to which we must consider, that the Trade of this Colony, as well as that of *Maryland*, consists almost entirely of Tobacco; for though the Country would produce several excellent Commodities fit for Trade, yet the Planters are so wholly bent on planting Tobacco, that they seem to have laid aside all Thoughts of other Improvements. This Trade is brought to such Perfection, that the *Virginia* Tobacco, especially the sweet-scented, which grows on *York* River, is reckoned the best in the World, and is what is generally vended in *England* for the Home Consumption; the other Sorts, called *Oronoco*, and that of *Maryland*, are hotter in the Mouth, but they turn to as good account, being in demand in *Holland*, *Denmark*, *Sweden*, and *Germany*; it is therefore from this Commodity that we are to look for the best Part of that vast Sum which we have mentioned; and if we proceed diligently, and with Attention, I dare say we shall not search in vain.

In time of Peace, I am persuaded from several different Calculations, and from the Comparison of the Informations I have sought and received from such as are, or ought to be, best acquainted with these Matters, that there is very little less than one hundred thousand Hogheads of Tobacco exported every Year from this Colony; that between three and four hundred Ships are employed in this Trade, and upwards of four thousand Seamen. If we take things upon this foot, then the hundred thousand Hogheads of Tobacco will produce about the Sum at which I have fixed the Produce of this Colony to the Nation; but it may be said, that if we take Tobacco for the Commodities and Manufactures that we send to *Virginia*, it differs very widely from an Annuity, and that instead of receiving 1,200,000 *l.* from the Persons inhabiting this Plantation, we return them the most valuable Things we have, for 60,000,000 Pounds of Tobacco, which in itself is no Necessary of Life, and which we might very well do without. Thus we are all at Sea again, and it is my Business to set us once more on Shore; and if I am able to clear up this last Mist, I hope there will for ever after be fair Weather for the Plantations.

The Solution of this Difficulty, so as not to leave the least Shadow of Doubt, is very far from being a Thing extremely hard. Let us consider that Tobacco was in use amongst us long before it was cultivated, or at least brought to Perfection, as appears by King *James* I. writing a Book against it; what we used came hither from *Brazil*, or from the *Spanish* Plantations, and was actually sold here from four to seven-

450 *TRADE and COMMERCE.*

teen Shillings a Pound. In case the Consumption of Tobacco had become equal to what it is now, and we had been furnished with it by Foreigners, it would have carried off all our Commodities and Manufactures into the *Barlin*; but suppose it had fallen to five Shillings a Pound only, this alone would have cost us seven Millions either in Goods or in Money. I am very sensible that the Supposition is ill founded, and that Tobacco at five Shillings a Pound could not have grown into general Use, but into frequent and common Use it would have grown; and therefore it must have cost us a great deal; whence it may be justly inferred, that our Home Consumption is so much saved as the Value amounts to. Besides this, we export annually forty thousand Hogheads, which produces us generally three hundred thousand Pounds, the neat annual Income of one Commodity brought over from one of our Colonies. By this Sample let us judge of the rest, for we cannot pretend to insist upon any other in this Chapter.

All the other Colonies, Settlements, and Establishments, which we have in different Parts of the World, contribute in like manner, but in different Proportions, to take off the Commodities and Manufactures, to employ the People, to increase the Shipping, and to extend the Trade of this Nation; and with this singular and valuable Advantage, that so long as we behave towards them with the Duty and Tenderneſs of a Parent, it is simply impossible that this Trade should fail us, or that we should lose any Part of our Plantation Commerce, which is augmenting every Day. We have already enumerated the principal Commodities we have from thence, and shewn how they become, when wrought, to all Intents and Purposes our own Manufactures; so that the People in the Colonies, and their Slaves, where they have Slaves, undergo all the Drudgery and Labour, while we subsist our own People by the Manufacture of their Commodities, and draw from thence annually immense Profits, in which the People of the Plantations have no Share whatsoever. Such are the Prerogatives of a Mother-Country, and such and so great the Benefits she reaps by being so!

But it may possibly be insinuated, that our Colonies drain us of a Multitude of People, that the Number of its Inhabitants is both the Strength and Riches of the Country; and that therefore whatever our Advantages in this way may be, it is not impossible that still greater Advantages would have accrued, if these People had remained in *Britain*. But in this there lies a great Fallacy, for the Truth of the Matter is, that

TRADE and COMMERCE. 451

that in a Country like ours, where Trade and Manufactures flourish, Colonies are so far from being a Drain, that they really procure, or at least are one principal Cause of augmenting our People; and though at first sight this may look like a Paradox, yet when attentively considered, the Reasons offered to support it, will shew that it is a Truth. The People we have in the Plantations consume more Goods of the Growth and Manufacture of this Island, than if they were at Home; this creates a Demand that heightens Wages, and this again attracts People from other Nations. Besides our Plantations, generally speaking, draw off in the Beginning only such Sort of People, as either would not, or could not have staid at Home; and therefore instead of losing so many as went thither, we really kept them and their Posterity by this very means. As to those again that have gone over since, with a View to raise their Fortune by their Industry, we can no more be said to lose them, than if they had removed from one Part of this Island to the other; and the Fact, when truly stated, is, that by going to the Plantations, settling and improving there, they have done as much more Good than they could possibly have done by staying at Home. Nor is this all, for as no such Evil as this Drain of People is pretended to be, has been ever yet felt, so it is not at all likely that it ever will; for the very same Causes that excite a Disposition to go and settle in the Colonies, must be ever productive of beneficial Consequences to the Mother-Country, so long as this Relation between them continues, that is, so long as we continue a trading Country, and a maritime Power.

After having thus examined into the Reason of the thing, and shewn how great a Probability there is, that this single Objection that has been, or can be made, has really no Foundation; let us next have recourse to Experience, for if that concurs with our Reasonings, we must certainly be in the right. In the first place let us ask, *What was the Condition of this Country before we had any Plantations?* The Answer drawn from History and Observation, must be to this effect: At the time Queen *Elizabeth* entered upon the Government, the Customs produced thirty-six thousand Pounds a Year; at the Restoration, they were let to farm for four hundred thousand Pounds, and produced considerably above double that Sum before the Revolution. The People of *London*, before we had any Plantations, and but very little Trade, were computed at about one hundred thousand; at the Death of Queen *Elizabeth*, they were increased

452 TRADE and COMMERCE.

to one hundred and fifty thousand, and are now about six times that Number. In those Days, we had not only our Naval Stores, but our Ships from our Neighbours. *Germany* furnished us with all Things made of Metal, even to Nails; Wine, Paper, Linen, and a thousand other Things came from *France*. *Portugal* furnished us with Sugars; all the Produce of *America* was poured upon us from *Spain*; and the *Venetians* and *Genoese* retailed to us the Commodities of the *East-Indies* at their own Price. In short, the legal Interest of Money was Twelve *per Cent.* and the common Price of our Land ten or twelve Years Purchase. We may add, that our Manufactures were few, and those but indifferent, the Number of *English* Merchants very small, and our Shipping much inferior to what now belong to the *Northern Colonies*. These are plain and certain Facts: but as soon as we began to extend our Trade, and to make Settlements Abroad, the Face of our Affairs changed, the Inhabitants of the City of *London* were doubled by the End of the last Period, and are again doubled before the End of this; our Shipping increased in a still greater Proportion; we coined within twenty Years after that *Queen's* Death, above five Millions at the *Tower*; in twenty Years after that, seven; and in the next twenty Years, eight; which are indubitable Proofs, that we had gained a prodigious Balance of Trade in our favour.

The next Point I shall consider is, *What our Condition has been since?* And with respect to this I may boldly affirm, that it has altered for the better, almost to a Degree beyond Credibility or Computation. Our Manufactures are prodigiously increased, chiefly by the Demand for them in the Plantations, where they at least take off one half, and furnish us with many valuable Commodities for Exportation. Instead of taking the Quantities we were wont to do of Goods from other Nations, we actually export those very Goods, and sometimes to the very same Nations. Sugar, Rum, and Tobacco, are the Sources of private Wealth, and public Revenue, which would have been so many Drains that would have beggared us, had they not been raised in our Plantations. It is no longer in the Power of the *Russians*, to make us pay what they please for Flax and Hemp. The *Swedes* cannot compel us to pay their own Price, and that too in ready Money, for Pitch and Tar, nor would it be in their Power to distress us, should they attempt it, by raising the Price of Copper and Iron. Logwood is sunk seventy-five *per Cent.* Indigo, and other Dying Materials, are in our Power, and



TRADE and COMMERCE. 453

and at moderate Prices. In short, the Advantages are infinite that redound to us from our *American* Empire, where we have at least a Million of *British* Subjects, and between fifteen hundred and two thousand Sail of Ships constantly employed. Such have been the Fruits, such is the Condition of our Plantations; and let any Man doubt of the Benefits resulting from them to this Nation if he can; or when he reflects on the Numbers maintained here by their Industry, and even by their Luxury, let him deny, or envy their Wealth, if it is in his Power.

C H A P. VIII.


Of Navigation and Shipping, the great Advantages arising from them to all Nations in general, and to ours in particular; with some Observations on the natural Advantages of one Country over another in these respects.

THE Advantages of Shipping and Navigation have been more than once incidentally mentioned already; but it was necessary to bestow an intire Chapter upon these Subjects, that the Importance of them might the more clearly appear. Navigation is a thing of such Consequence, that if it be prosecuted with Vigour and Application, it may prove the means of establishing Commerce, and of sustaining and preserving it even where Commodities are wanting. I have already shewed that this is the great Advantage of the *Dutch*, but at the same time an Advantage attended with many Insecurities. It does indeed Honour to the Abilities and Diligence of a People, that without deriving from Nature, either Materials for Building, or Naval Stores, she exceeds all other Nations in Shipping; but at the same time there is no Difficulty in foreseeing the Condition of that Nation must be liable to great Alterations; for whatever is violent and contrary to Nature, cannot last long; and those are shallow Politicians, who fancy that Solidity and Strength arise from a sudden and vigorous Growth, whereas States that become soon formidable, soon pass the Prime of Life. It must however be, allowed, that while Navigation can be kept up, there is no Danger that Trade will fail, or even decline. It is by this means, that the whole World is connected, and all the

454 TRADE and COMMERCE.

different Parts of it correspond one with another. It is this Correspondence that introduces new Commodities, and sets on foot fresh Manufactures. The *China* Ware of that famous Empire, and *Japan*, have certainly cost *Europe* large Sums of Money, but these have in a good measure been compensated by the Potteries, which a Spirit of Imitation has produced in various Countries, but in *Holland*, *England* and *France* particularly. In the same manner, the Cotton Manufactures of the *Indies*, have produced the like in *Europe*; and there is the utmost Certainty, that the Silk Trade is spread even hither by degrees, from *China*, where it was originally cultivated.

It appears therefore that Navigation has a double Advantage, it enables the Inhabitants of the Country where it flourishes, to export what they have, and to import what they have not. Nay, it does still more, for it vests in them a Power of procuring Commodities from one Place, and after manufacturing them at Home, exporting them to another; and a little Practice of this Sort, begets such a Genius for Commerce, that such as are accustomed to it, are continually inventing new Methods for augmenting the Number of Advantages they derive from thence, and repairing the Deficiencies which arise in length of time, and from that Vicissitude to which all things in this World are liable. They have a constant Knowledge of the Wants of other Countries, and the Means by which they may be supplied, and this gives them vast Opportunities of enriching themselves, merely by being the Agents and Carriers between those who suffer from Indigence, and such as are blessed with Abundance. These People avail themselves of the Condition of both, for they sell in proportion to the Necessities of those that buy, what they purchase cheap from those who sold cheap, because they had Plenty. By frequent Voyages to the same Country they find means to transport from thence skilful Artists to their own, where by the Application of their Talents, they discover Treasures that had long lain hid from the Natives themselves, and by the Proposal of great Advantages, they engage in like manner the ablest Manufacturers to desert the Place of their Birth for another, where they may thrive more and labour less. By the same Method they extend that Navigation, with the Value of which they are so well acquainted, and thus transfer the Advantages long reaped by others to themselves. It was by a Man they released out of Prison at *Lisbon*, that the *Dutch* were first taught the Route to the *East-Indies* by the *Cape of Good Hope*, and they were indebted



TRADE and COMMERCE. 455

ed to *English* Pilots for the first Voyages they made to the *West-Indies*, and also to *Japan*.

While we were Strangers here to Navigation, our Country was thin of People, we lived as it were upon the main Stock. A few Staple Commodities, and a very few Manufactures were all we had, and when taken off by Foreigners, they furnished us with what they thought fit, and almost at their own Rates. But when once Navigation began to thrive, when instead of freighting other People's Ships, we bought Vessels of our own, and our People began to take a Liking to the Sea, the State of Things were quickly changed; we brought home the Product of other Countries at a small Expence, in comparison of what they cost us, and by opening different Markets, found means to vend what we carried out, at much higher Rates. This Intercourse did not continue long before it introduced an Alteration of Manners, a Change in our Habits, Furniture, Building, and Way of Living; in short, it multiplied our Wants, and the Desire of supplying them begot Plenty. As we imported many Things from Abroad that were entirely new and strange, so we found many Things at Home of small Value, which were in high Esteem Abroad. In Process of Time, we looked more closely into the Causes why other Nations were rich, and having found them, we began to imitate their Manufactures, and improve their Inventions. In respect to the latter, we were remarkably happy, and this very soon enabled us to excel in the former. Thus we learn from one Nation to Weave, from another to Dye, and from a third to vary our Manufactures from Cloths into Stuffs. We learn from the *Germans* Clock and Watch-Work; we brought the Art of making Glass from *Italy*; and by the *Dutch* we were instructed in the curious Mystery of casting Types for Printing, in all which we now are equal, and in the two first without Controversy, superior to our Masters; nor should I hesitate in affirming the same of the last, if it depended not upon a single Hand, whose Dexterity seems to be above the reach of Imitation.

It is by our Progress in Navigation, that we have realized and secured the Advantages Nature invested us with by our Situation. By this means every Harbour, every little Port, Inlet and Creek, is become a new Benefit, as it opens a Passage for what we want to send Abroad, and an Entrance to whatever we would bring Home. To this we owe the happy Distribution of our Trade, so that every Branch of it is, or may be managed to the utmost Advantage, as

456 *TRADE and COMMERCE.*

it is scarce possible for any Wind to blow that does not carry Vessels from one Port and bring them into another; in short, Navigation may be considered as the Channel thro' which all our Commerce circulates; and from hence we may learn, of how great Importance it is, that it should be free and undisturbed; from hence we see, that whatever clogs or impedes it, must be a universal Detriment; for it is with the Body Politic, as with the Natural Body, if the Circulation suffers, it can never be sound; and from hence we also discover, that whatever promotes Navigation, promotes the general Interest of the Nation, as Trade depends upon it, and upon Trade the Value of our Houses, our Lands, and their Produce.

To enter into the History of our Shipping, would lead us into a very large Field, which, though curious and entertaining, would not contribute to instruct us much, yet a few Touches upon this History may be very proper. Our Shipping in the Days of the *Norman Kings*, could be but very inconsiderable; for in Queen *Elizabeth's* Time, that is, in 1575, I find that the whole Royal Navy consisted of but twenty-four Ships, the largest of which was the *Triumph*, of the Burthen of one thousand Tons; the smallest was called the *George*, and was under sixty Tons; I likewise find, that all the Shipping in *England* above the Burthen of forty Tons, and below that of an hundred Tons, amounted only to six hundred and fifty-six Vessels; and those of an hundred Tons and upwards, of all Sizes, amounted to one hundred and thirty-five. The whole of our Naval Force, (for not only all the Ships in the Queen's Service, in *A. D.* 1588, or she could hire, but as many more were fitted out at the Expence of the Inhabitants of Sea Ports, and other private Persons) yet amounted in the whole, but to one hundred and forty-three, including Tenders, Storeships, and Vessels of all Sizes, great and small. In the Reign of King *James*, there were nine Ships of War added to the Royal Navy; and whereas at the Death of Queen *Elizabeth*, the Navy might consist of sixteen thousand Tons, at the Death of King *James* it amounted to twenty-three thousand. In his Reign, Ship-building was brought to a great Perfection, by the famous *Phineas Pett*, who, after a liberal Education in the University, applied himself with vast Success to this curious Art, in which he arrived at much greater Perfection than any Man in his Time. Before the breaking out of the Civil Wars, our Navy was considerably increased; and this I take to be the clearest Proof of the Increase of our Shipping

TRADE and COMMERCE. 457

ping and Navigation, which always augmented in the same Proportion, the Causes of which we need not explain, because the Thing speaks itself.

At the Time of the Restoration, our Fleet was very considerable, and on account of the *Dutch War* that followed soon after, was greatly augmented. In the Year 1670, the Lord Keeper *Bridgman* affirmed, that for ten Years past, the annual Charge of the Navy amounted to half a Million; and in 1678, the Royal Navy consisted of eighty-three Ships, of which fifty-eight were of the Line of Battle; and at this Time Sir *William Petty* computes, that the Exports of this Nation amounted to ten Millions a Year. The Balance of our Trade is by Dr. *Davenant* fixed at this Time to two Millions, and indeed it could not be less. At the Revolution the Royal Navy consisted of one hundred seventy-three Sail, great and small, carrying in the whole about seven thousand Guns. Since that Time, it has been continually increasing, so that according to the last Abstract in the present Year, it amounts to three hundred twenty-two Sail, carrying twelve thousand two hundred and seventy Pieces of Cannon; and if all were in Commission, and manned to their full Complement, they would amount to eighty-three thousand four hundred Seamen. We may from thence form some Idea of the vast Augmentation of our Navigation and Shipping in general, which without all doubt has been, if not exactly, yet very nearly in Proportion to that of our Fleet.

There is yet another kind of Computation which may be of great use to a young Reader, and that arises from the Comparison that may be made between the Maritime Powers of *Europe*; a Point that has very often and very justly exercised the Thoughts of the greatest Men. Sir *Walter Raleigh* made a very ingenious Calculation of the Maritime Power of *Europe* in his Time; and Sir *William Petty* from better Lights gave us another Calculation, which has been considered as the Standard ever since. He thought that the *Dutch* had about 900,000 Ton in Shipping; *Great Britain* 500,000; *Sweden*, *Denmark*, and the Trading-Towns in *Germany* 250,000; *Portugal* and *Italy* 250,000 likewise, and *France* about 100,000. But since that Time, Things have altered very much, both with respect to us and other Powers, insomuch that I am fully persuaded, that our Shipping was before the breaking out of the late War, at least double to what it might be at the Conclusion of the Peace of *Utrecht*. It is, I must freely acknowledge, a very difficult thing to pretend to give with any Degree of Exactness, the present Proportions of Maritime


458 *TRADE and COMMERCE.*

ritime Power; however till a better can be formed, I flatter myself the following Table may have its Uses.

If the Shipping of *Europe* be divided into twenty Parts, then

<i>Great Britain, &c.</i> hath	_____	_____	6
The <i>United Provinces</i>	_____	_____	6
The Subjects of the Northern Crowns	_____	_____	2
The trading Cities of <i>Germany</i> , and the <i>Austrian Netherlands</i>	_____	_____	1
<i>France</i>	_____	_____	2
<i>Spain and Portugal</i>	_____	_____	2
<i>Italy</i> , and the rest of <i>Europe</i>	_____	_____	1

The Grounds upon which this Calculation stands, would require a great deal of Room to explain. And after all, it might prove no easy thing to persuade such as are acquainted with the Commerce only of this or that particular Country, to admit that the Computation is fairly made; but however, it will I dare say be found, that such as are concerned for any particular Country, will allow the Table to be right enough as to the rest, which is as much as any one can well expect. It must be also allowed, that as these Proportions are continually varying more or less, so a Computation of this Kind cannot long continue very near the Truth; but as these Defects are in the Nature of the thing, and not at all in the Computation itself, this is a reasonable Excuse; and besides, with respect to the End for which it is here produced, it is sufficiently useful, as it will serve to give a general Notion of this Matter, and by shewing its Importance, put the Reader upon such an Enquiry, as may enable him to rectify any Errors that Time and Chance, which happen to all Things, may introduce.



TRADE and COMMERCE. 459

CHAP. IX.

A View of the Foreign Trade of Great Britain, shewing the several Countries to which we export, and from which we import Commodities and Manufactures; with some Observations and Remarks on the Nature of the Commerce carried on to and from the several Countries therein mentioned.

THE Design of this Chapter is no more than to exhibit the Heads of a General History of *British* Commerce, and to trace the Out-lines of a prodigious Structure: that after having made himself acquainted with the general Principles relating to Trade and Navigation, and seen how far they are capable of contributing to the Welfare of any People, it may be also in the Power of the Reader, to have a Glimpse at least of the great End to which this is directed, and acquire some Idea of what makes such a mighty Noise in the World, I mean the *British* Commerce. A thing which attentively and distinctly considered, will appear to be in the small Number of those which Fame has endeavoured to magnify in vain; and yet there is nothing more true, than that almost every single Branch of it is very capable of Improvement; so capable, that I make no Scruple of affirming the Commerce of *Britain* might be raised as much beyond what it now is, as it has been carried beyond what it was at the Time of the Restoration. A Work worthy the Attention, and which would well reward the Pains of our disinterested Patriots, and virtuous Ministers. Let us at present overlook the future Prospect, and content ourselves with considering it as it is.

The Commerce between *Great Britain* and the Countries subject to the Grand *Signior*, is carried on by the Merchants incorporated into the *Levant* or *Turkey* Company, now open'd in such a manner, by a late Statute, as to be more capable of answering national Purposes; without lessening the particular Advantages, which *Turkey* Merchants ought in Justice to enjoy. The Commodities we export are chiefly Lead, Tin, and Iron; and of our Woollen Manufactures, Broad Cloth, and long Ells. It is also said, that our Merchants send thither *French* and *Lisbon* Sugars, as well as Bullion. We take in Return raw Silk in great Quantities, which however is only proper for the Shute of our Damask, and other colour'd Silks; will also serve for making Stockings, Galloons, and Silver and Gold Lace; but is not proper for the Warp of any Silk, nor even for the Woolf of some of the finer Sorts.

W.

460 TRADE and COMMERCE.

We import also Grogram Yarn, Dying Stuffs of various kinds, Drugs, Soap, Leather, Cotton, Fruit, Oil, &c. While the War continued, it was a great Help to us in this Trade, as the *French* are our principal Competitors therein; and as they suffer'd very severely not only by Captures, but by the high Insurance they pay'd on all the Goods they exported; so they could not but come very dear to Markets, and perhaps we preserve still some of the Advantages then acquired.

We export to *Italy* of our own Commodities, Tin and Lead, great Quantities of Fish, such as Pilchards, Herrings, Salmon, Cod, &c. Various Kinds of *East-India* Goods; and of our Manufactures, Broad Cloths, Long Ells, Bays, Druggets, Camblets, and other Stuffs; as also Leather and other Things. We import from thence prodigious Quantities of Silk, raw, thrown, and wrought; Wine, Oil, Soap, Olives, Dying Stuffs, &c. It is from this Country, and more especially from the Dominions of his *Sardinian* Majesty, that we have the fine Silk called Organzine, which is thrown by an Engine much truer than it can be by Hand, of which we have one, and but one, at *Derby*. That Prince however has taken care to preserve to his Subjects this precious Commodity in its full Extent; for we have no *Piedmont* Silk raw, and what we have we pay for in ready Money, at a very high Rate. This therefore makes the Balance of Power, and the Change of Masters, at least in the Maritime Part of *Italy*, a Thing of very great Consequence to *Great Britain*, and as such it ought always to be considered by our Ministers, and if possible in no other light.

We export to *Spain*, Tin, Lead, Corn, &c. Pilchards, Herrings, Cod, and other kinds of Fish; of our Manufactures, Broad Cloth, Druggets, Bays and Stuffs of various kinds, as also a great Variety of different Goods, which are reshipped by them from *Cadix* to their Colonies in *America*. On the other hand, we import from *Spain*, Wine, Oil, and Fruit, Wool, Indigo, Cochineal, and other Drugs. It appears from hence, that if the *Spaniards* are good Customers to us, we are also the best Customers they have; for it is thought we take off two thirds of their Commodities; so that considering them as a Nation, nothing can distress the *Spaniards* so much as a War with the *English*. It is very true, that in time of Peace we draw a considerable Balance from thence in Specie or in Bullion; but at the same time, we furnish them with the Commodities that are most necessary, with the Manufactures that bring them this Bullion, and take also vast Quantities of Commodities that must otherwise lie upon their Hands; where-

as the *French* furnish them with many Trifles, as well as some costly Manufactures, for which they are paid wholly in Silver. Hence it appears, that it is the mutual Interest of *Spain* and *Britain* to deal with each other; and if this was thoroughly inculcated, it would enrich us and serve them.

We export to *Portugal*, Tin, Lead, Corn, Fish, and almost all of our Commodities; as also Broad Cloths, Druggets, Bays, Stuffs, Leather, and many other Manufactures; we take from them Wine, Oil, Salt, and Fruit; so that though it is generally supposed the Balance of this Trade is as much in our favour as any, yet the *Portuguese* find their Account in it; for in the first place, we take almost all the Commodities they export, and for which, if we did not take them they could hardly find another Market; and we furnish them with the best part of those Things they export to the *Brazils*, and thereby draw that immense Treasure yearly, which, for its bigness, renders *Portugal* one of the richest Countries in *Europe*. Besides, these reciprocal Advantages have made such a Connection between our Interests, that upon all Occasions we have been ready to espouse those of *Portugal*, and to protect her from the only Power she has reason to fear, by the timely Interposition of our Maritime Force.

We export to *France*, Tin, Lead, Corn, Horn-Plates, and great Quantities of Tobacco, some Flannels, and very little else of our Manufactures; we take from thence, in Time of Peace, Wine, Brandy, Linen, Lace, Cambricks, Lawns, (unless our late Acts can keep them out) and an infinite Number of other Things which are run in upon us, and whatever else the *French* are pleased to direct; whence it appears, that of all others, the *French* Commerce is to us the most dangerous and destructive.

We export to *Flanders*, Tin, Lead, and some Iron-Ware, as also Sugar and Tobacco; of our Manufactures, Serges, some Flannels, and a few Stuffs. On the other hand, we take from them fine Lace, Cambricks, Lawns, Linen, Tape, Inkles, and other Goods of that kind, to a very great Value; so that there seems to be no doubt that the Balance of this Trade is considerably against us, which is chiefly owing to the Prohibition of our Cloth; and therefore if any thing be worthy our seeking on the Continent, it is the Port of *Ostend*, with a small District about it, which at the same time would be of service to our Allies, and might contribute to repair the Expences we have been at in our several Land-Wars. This I mention only incidentally.

We

462 TRADE and COMMERCE.

We send to *Germany*, Tin, Lead, and many other Commodities; Tobacco, Sugar, Ginger, and all kinds of *East-India* Goods. Of our Woollen Manufactures, some of almost every kind we make. On the other hand, we take from them Tin-Plates, Linen, Kid-Skins, and several other Things. The Balance of this Trade is looked upon to be very much in our Favour, but it might be made still more; for in many Places of late they have prohibited different kinds of our Manufactures, and in some they have prohibited all. But in our Treaties of Subsidy, if we had an Article to prevent or remove such Prohibitions, it would be but reasonable: for as we pay the *Germans* for fighting their own Battles, they might methinks in return allow a free Vent to our Manufactures, and as they are sure of taking our Money, give us a Chance at least for seeing some of theirs.

We have a great Trade with *Denmark* and *Norway*, but we export very little; a small Quantity of Tobacco, and a few coarse Woollen Goods is all; but we are forced to tack to these Crown-pieces and Guineas, to pay for Timber and Iron; and the Matter is not at all mended, but on the contrary grows worse, if instead of exporting our Wealth, we stay till the *Danes* come and fetch it, for then we not only pay for their Goods, but the Freight also; and this Evil it seems is not in our Power to cure at present.

We carry on the same kind of losing Trade to *Sweden*, where it is a Maxim of State to beat out as much as possible all our Commodities and Manufactures; and this has been so steadily pursued, that it is now pretty near done, and Gold and Silver are almost our only Exports. Copper, Iron and Naval Stores, are the Goods we bring from thence, to the Amount of about three hundred thousand Pounds a Year. We were formerly under a Necessity of doing this; because their Goods must be had, and could be had no where else. At present it is otherwise, we might have all these at much more reasonable Rates from our own Plantations, which is much the same thing as having them at Home; so that one well-considered Act of Parliament would free us from this Inconveniency, keep so much ready Money in the Kingdom, and keep a Nation from thriving by our Trade, who have for a long Space of Time shewn very little Regard for our Friendship.

We export to *Russia*, Tin, Lead, and other Commodities, a great Quantity of Tobacco; and of our Manufactures, coarse Cloths, long Ells, Worsted Stuffs, &c. on the other hand we import from thence; Tallow, Furs, Iron, Pot-Ashes,

Ashes, Hemp, Flax, Linen, *Russia* Leather, &c. Our Trade to this Country is managed by a Company, the best constituted, and the best conducted of any that we have; for any Merchant may be admitted into it for a very small Consideration, and the Measures they pursue are such as prove highly beneficial, and never can do any Harm. The Trade thro' this Empire into *Persia*, may become a Thing of great Consequence, as it will furnish us with that Sort of Silk which we want most, at an easy Price, and may be attended with other Advantages that we have not room to explain.

We export to *Holland* almost all the Commodities and Manufactures that we have, as well as most of our Plantation Goods, and of those we bring from the *Levant* and the *East-Indies*. We import prodigious Quantities of fine Linen, Threads, Tapes, Inkles, Whale-fins, Brass-Battery, Cinnamon, Mace, Cloves, Drugs, and Dying-Stuffs, &c. yet with respect to the fair Trade we have a large Balance; the only doubt is, how far this may be abated by the great Industry of those detestable Miscreants the Smuglers, who gain their Bread and raise Fortunes by a steady Pursuit of their private Interests, at the Expence of the Public; so that being our most dangerous Enemies from their Practices, there is no kind of Injustice in punishing them as Out-laws, and looking upon them as Traitors.

With respect to our *African* Trade, it is certainly of the highest Importance to the Nation, for it creates a vast Exportation of our Commodities and Manufactures, and produces a large Balance in Bullion from the *Spaniards*, as well as in Gold-dust, Red-wood, Ivory, and other valuable Commodities, some of which are re-exported; but above all it supplies our Plantations with Negroes, which is a Thing of prodigious Consequence. The old *African* Company of *England*, once the most flourishing and profitable of all our Companies, and but for bad Management within, and Party Prejudice without, might have continued so, has been at length dissolved by Parliament, and the Commerce put into a new Channel, which either answers, or will be made to answer national Purposes, since no Commerce can more nearly concern *Great Britain* and her Colonies than this does, and scarce any is so much the Subject of foreign Envy.

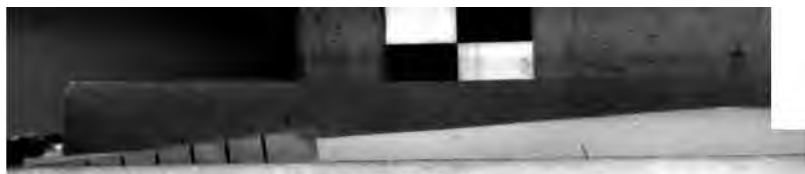
The *East-India* Trade is a prodigious Thing, and of great Benefit to the Nation, tho' we export chiefly Bullion; and tho' it is carried on by a Company. But the Goods we bring Home are bought at low Prices, are sold at high Rates, and what we export is very justly believed to produce a Balance equivalent

464 *TRADE and COMMERCE.*

equivalent at least to the Bullion that is sent out to buy them. It has been of late suggested, and not without good Reason, that this Commerce is capable of great Improvements, by extending it to the North-East; for in that Case, we might hope to vend large Quantities of our Manufactures, which would at once remove the only reasonable Exception that was ever taken to this Trade, augment our Navigation, and hinder the Northern Nations from interfering with us, by employing the very Money we pay for Naval Stores, in beating us out of a very considerable Branch of Commerce; for the carrying on of which those Stores are purchased.

As for the Plantation-Trade, we have already spoken of it, and without doubt is by far the most considerable of any that we have, and which ought to be a Comfort to us, is notwithstanding this, far less considerable than it might be; for with a little Pains and Encouragement, it might be made in its Savings and in its Produce, twice or thrice as beneficial as it is; for it has been computed, that by encouraging Hemp and Flax, Pot-Ashes, Timber, Iron, and other naval Stores, and Silk, we might either get or keep considerably above a Million annually, and by making other Regulations it is demonstrable, that within a few Years we might gain as much more.

Thus the Reader sees from this short Discourse what Trade was, what it is, and what it might be. May the Giver of all good Things, to whose gracious Disposition we already owe so much, incline us to a grateful Sense of his Goodness, and teach us to make a right Use of the numberless Advantages he has put into our Power! and may it be the Study of the rising Generation, to prosecute whatever their Ancestors have wisely begun; to amend their Errors, and to exceed their Endeavours, so shall we remain a rich, a powerful, and a happy People!



PART XI.

ON

Laws and Government.

VOL. II.

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(467)

ON
L A W S
AND
GOVERNMENT.

CHAP. I.

An Enquiry into the Principles of Society; different Sentiments upon that Subject examined; great Difficulties that occur in learning any thing satisfactory on this Head, from History; Liberty, a Thing little understood; false Notions about it; true Liberty derived from Laws and Government, which civilize and polish human Nature; from whence arises the moral Obligation of preferring the Welfare of Society to all other Considerations.

THERE are very few Subjects that have been more frequently handled, or more largely discussed, than those which are to be the Subject of this Discourse, and yet there are hardly any Subjects about which, even the greatest and wisest Men have differed more. It appears to be, and indeed it is a very difficult thing to assign the true Cause of this; but that which seems to bid the fairest for that Character, is the different Views with which most of those Writers penned what they have delivered upon these Heads; for it must be allowed that very few have written entirely without Biass, that is, without a Design of recommending some particular System, by laying down its fundamental Principles, as those upon

H h 2

which

which human Society either was, or ought to have been built. This however is not at all our Intention; for we mean not to amuse young Minds with any such artful Schemes, but on the contrary, aim only at the Discovery of Truth; and therefore we shall exhibit the Sentiments of others, and by comparing them, endeavour to give as fair and as genuine Representations of these difficult Points as in their Nature they are capable of receiving.

A great Part of those wise and learned Men who have endeavoured to trace out the Origin of Government, have conceived, that as all States are made up of a lesser or greater Number of Families, so the first kind of Government must have been that which is natural in every Family where the Parent is the Head or Chief, and this is stiled the Patriarchal Scheme. Others again, considering the natural Disposition of Men, and their Proneness to gratify their Desires at the Expence of each other, have supposed, that a State of Nature was a State of War, and that Laws and Government were introduced by the dear-bought Experience of the many Inconveniencies with which such a State was naturally attended. The Arguments offered on both Sides are very plausible, and have a great Appearance of Reason; notwithstanding which, the Objections that have been raised against each of these Notions are also very weighty, and cannot easily be answered. It may perhaps be the most probable Way of coming near the Truth, to blend these Sentiments; for as on the one hand, Men do not spring like Mushrooms in a Night, so it is reasonable to allow, that while there were but a few Families in the World, Patriarchal Government might take place; but as Families multiplied, there seems to be no Reason to doubt that Contentions might ensue, and that for the Remedy of those Inconveniencies which such Contentions produced, the wiser and more sober Part of Men had recourse to certain Restrictions, or, in other Words, Laws; and for the enforcing and maintaining of these, introduced that kind of Order which is stiled Government.

One would naturally suppose, that the best Account of these primary Laws, and the earliest Forms of Government might be learned from History; and yet we do not find that by this Method any great Certainty can be attained. The Writings of *Moses* are the most ancient we have, and very probably contain the Substance of earlier Writings, long ago lost and buried in oblivion. From thence we learn indeed, how the World was first peopled; but with respect to Laws and Government they are remarkably silent, only thus
much

much appears in Favour of what we have advanced as to the blending the opposite Systems, that the Patriarchal Government did not long subsist, but, on the contrary, Dissentions began, and as Families multiplied they spread themselves upon the Face of the Earth, and lived (if we may be allowed the Expression) under different Constitutions, tho' of what Nature they were does not at all appear. As to profane Histories, they are still more dark, and consequently less is to be learnt from them; nor shall we find ourselves much better instructed, if instead of making historical Researches, we have recourse to Experience, and look for the original Forms of Laws and Government among new-discovered Nations; for there we find the same Differences and Varieties, one People being governed one Way, and another in a Method quite opposite. Some, as in *Greenland* and the Northern Parts of *America*, living in Families in a State of Independency; others in Tribes under the Chiefs of particular Families; and in many Countries we find Princes and their Counsellors elected on the Score of Merit, and more especially military Abilities; so that on the whole, there is no arriving at any Sort of Certainty by these Enquiries, the great Fruit of which seems to be no more than this, that it is a vain thing to look for any original System, and that all things considered, it is most likely that Laws and Government, like other things, have in all Places suffered such a Variety of Changes, that we can only know they have been every where found more or less necessary, and have been introduced and submitted to in its turn by every Nation, for the Sake of the Advantages they produce, and in proportion as these were understood.

There can be nothing more evident, than that with respect to the Condition of Mankind there is an absolute Equality; so that it is a wild and absurd thing to say, that from the Law of Nature there arises any Claim of Authority, or Obligation of Obedience. But tho' it be true, that every Man is born free, or at least that every Man is born as free as another, yet the Weaknesses and Infirmities to which human Nature is liable, immediately begets not an Expediency only, but a Necessity of Subjection. If there were any Occasion of fortifying this, we might also intitle it to a divine Law; for the natural Affection which Parents have for their Offspring, and which puts them upon subsisting and educating them, is implanted in the Heart of Man by his Creator, as much as any other Passion or Inclination of the Mind; and from this paternal Care and Affection,

the reciprocal Obligation of filial Obedience plainly arises. But it does not seem to follow, that this filial Obedience is of the Nature of that political Subjection, of the Origin of which we are now in search, and that for this Reason; because in Process of Time this Obligation is lessened or taken away by the growing up of the Son, and his becoming in his turn the Father of a Family, and the Master of a Household. From what has been said it appears, that there is a Difference between natural and civil Obedience, and that tho' it may in one Sense be affirmed, that all Men are naturally equal, yet this is to be understood with respect only to civil Power and civil Obedience; and therefore to these only our Notions of natural Liberty must be confined.

We must however allow, that in the Number of these Passions which are natural to the Heart of Man, the Love of Freedom is one of the strongest, and, like all other Passions, cannot therefore, simply considered as a Passion or Desire of the Mind, be criminal. But then on the other hand, this, as well as all other Passions, can be no longer innocent or laudable, than as it is regulated and directed by Reason. To be convinced of this we need only consider, that what we call Passions or natural Desires, are the Propensities of the Mind to the Attainment of Good, and what that is we must learn from that Instructor given us for this End by our Creator, which is Reason. When therefore we find Poets, Orators, or political Writers, celebrating the Praises of Liberty in very high Terms, and with many pompous Expressions, we must not take these in a literal and unlimited Sense; because if we do, they will signify just nothing, since unlimited and absolute Freedom in Individuals is a mere Chimera, a thing in itself impracticable, and the Endeavour of obtaining which would totally destroy the End; since if all Men were absolutely free, and were to prosecute the Claims incident to this supposed natural Right, they must break in upon and destroy each other's Freedom. Or to put this in fewer Words, and which will at once shew the Force of this Reason; we can have no Conception of this absolute Freedom, without supposing that every Man has a Right to every thing; and it is plain, that if all have an equal Right to the same thing, it is impossible that any should have a distinct and particular Right to it; but absolute Freedom implies not only a Right to enjoy, but a Power and a Capacity of enjoying whatever a Man has such a Right to; and as these Propositions are incompatible with each other, and as we are certain that Nature, and the Author of Nature never intends

intends Absurdities, we must be from hence satisfied, that absolute and uncontrollable Liberty is a thing inconsistent with our Nature, and therefore cannot be that Sort of Liberty which is the proper Object of our Desire.

But if by this Train of Reasoning the Notion of absolute and uncontrollable Liberty is exploded, it does not at all follow from thence, that the natural Desire we have for Liberty, is incapable of attaining its End; for if this was the Case, Man would by the Law of Nature, or which is the same thing in other Words, by the Will of his Creator, be a miserable Being, which is another gross and palpable Absurdity that can never be admitted. To extricate ourselves therefore from these Difficulties, and to reconcile this Passion for Liberty to other Circumstances of human Nature, we must endeavour to discover whether there be not some certain kind of Freedom practicable and attainable; for if this can be found, we come at once out of this Wilderness, and recover a fair and open Path to that Good to which we find ourselves instigated by Nature. These Reflections are not only in themselves just and proper, but are absolutely requisite for Men to make, that they may act suitable to the Rank they hold in the Scale of Beings, and thereby attain that Happiness of which they are capable, and of which they are only capable, by pursuing the Impulses of natural Desires according to the Lights afforded, and the Directions given them by Reason; for it is simply impossible, that a rational Being acting as such should be miserable, for all Misery is a Punishment, which can never be incurred but by our own Fault, that is, by our acting wilfully against the Rule of our Nature, or which is the same thing, willing ourselves to be miserable, and becoming so by our own Follies and Faults. But to avoid this Mischief in the present Case, let us, since we have seen what Liberty is not, use the same cool and equal Method to discern and find out what it is, and there is no Doubt that we shall succeed.

We have in the first Chapter of the former Discourse shewn, that the particular Wants and Distresses of Men, as Men, become the Causes of Ease and of Abundance, and with a little Attention we shall find that the Sacrifice or yielding up of this useless and impracticable Claim to absolute and unrestrained Liberty, is the true Source of that rational and real Freedom, which is the proper Object of that warm and vigorous Desire which is implanted in the human Mind. If all Men were to insist upon their Rights of possessing all things, it is plain they could possess nothing, or at

least the Possession of every Man would depend upon personal Strength or Force, which would render it extremely precarious, and of little or no Value. To remove this Difficulty, and that they might make way for a State of Peace and Security, the Eldest and most Considerate devised certain general Rules, by complying with which Quiet might be attained, and every Man enabled to apply his bodily Labour, or the Abilities of his Mind, for the procuring his own and his Family's Subsistence. After a little Trial, the Conveniencies resulting from this Contrivance made its Usefulness more and more apparent, and every Inconvenience being by degrees remedied through the Alteration of old, or by Addition of new Rules, the System at length reached Perfection. These Rules are what we properly stile Laws, by submitting to which, Men enter into a new State, and become Members of Society. This may be very justly stiled a new State, because it differs very widely from that which is conceived to be a State of Nature. In this there is an Equality between Man and Man, and every Individual seems to be guided either by his Appetites or his Necessities; and to gratify the one, or to relieve the other, his Claim of Right is so extensive, that there seems to be no other Bounds assigned to it, than what arise from the Opposition of superior Force from others. All these useless Rights, as we have before shewn, every Individual resigns when he becomes a Member of Society, and in Exchange for them he receives other Rights resulting from the fundamental Regulations of Society, which are of infinitely greater Value. His Prerogatives are indeed not so high, but in return for them he has Security, and if his Claim of Possession is limited, this very Limitation produces Property; so that in few Words, and by an easy Deduction of Proofs we have shewn, that Society is the Work of Reason; that in a State of Nature, Men are considered as a Species of Animals, and that we discover them to be rational Beings, first, by their exercising their Faculties in contriving the Scheme of social Life, and abandoning that Course which was suited only to their animal Nature.

It follows from hence, that when Men become Members of Society, it is the last Exercise of their natural Liberty, which they spontaneously lay down for the Sake of another kind of Freedom; which tho' in one Sense less extensive, yet is more so in another; for the Rules of Society take away only so much of natural Liberty as hinders one Man by superior Force from oppressing another; or in other Words, instead of a notional and impracticable Freedom, establish a rational

rational and real Liberty. But as the Laws of Society could not have any certain and effectual Operation, if the Force of the Society was not employed to support them, there arises from thence the Necessity and Reasonableness of Authority, which is the true and just Foundation of all Government. By this Chain of Reasoning we plainly discover, that as Society is built upon the common Interests of all, so the Institution of Government is for the common Benefit of all; and that Power which by the Regulations of Society is vested in those who are called to the Government, is no more than a Deposit of the common Rights of Mankind, which in the Hands of Individuals, were either noxious or useless; in the Custody of a few, for the Advantage of all; and that every Individual may enjoy his reserved Rights in Peace and in Security.

It is therefore in consequence of Laws and of Government, that Men are enabled to enjoy in this Life, that Happiness which is agreeable to the Nature of rational Beings; this calls forth Industry and Application, which are never seen amongst Savages; this puts them in a Capacity of improving the Country they inhabit, of procuring not only the Necessaries, but the Conveniences of Life, and removing all those Evils, that, considering their Circumstances in this World, it is in the Power either of their Skill or Force to remove. Whatever therefore in the wild Sallies of their Imaginations, Men of warm Genius may have advanced in favour of absolute Liberty and boundless Freedom, it must be plain to every one who can conceive the Difference between a Cabin and a commodious House, a Desert and a well-cultivated Country, a People living wild in Caves and Woods, and a Nation in full Possession of Ease and Abundance, that Society and Government, with respect to temporal Affairs, are at once the highest Effects of human Prudence, the true and solid Basis of rational Freedom, and the sole Foundation of all that can be styled Happiness in this World.

We may from these Considerations justly deduce the moral Obligation that every Individual is under, of adhering to and promoting the Interest of the Society in which he lives, and of which he is a Member. This is his first and capital Concern; because his own Security, Peace, and Happiness, depend upon it. In proportion as this Society flourishes or declines, in the very same Proportion must his own particular Interest and that of his Family increase or decay. A due and just Sense of this, and a warm and honest Inclination to fulfil the Dictates of that Sense, is what is properly and truly called

called public Spirit, the first and greatest of moral Virtues and without having a warm Feeling of which, it is impossible to be an honest Man. That there is sometimes Hypocrisy in this, as there may be in regard to all other Virtues, cannot be denied; but how criminal soever this Hypocrisy may be in him who is guilty of it, yet it is a strong Argument in support of the Virtue itself; for the more Mischief a false Patriot is able to do, the more worthy, the more amiable, the more laudable is the Character of a true Citizen, who acts from the great and glorious Desire of doing good to all.

CHAP. II.

An Account of the several Forms of Government that have prevailed in different Ages and Countries, more especially of the three regular Forms, of Monarchy, Aristocracy, and Democracy; the Excellencies and Commodities, together with the Deficiencies and Inconveniencies of each; the Origin and Nature of mixed Governments, their Advantages and Disadvantages; with a succinct Deauction of the Proofs that demonstrate any Form of Government to be capable enough of securing the Happiness of the People who live under it, provided it falls into the Hands of a wise and virtuous Administration.

WE have in the former Chapter given the Reader, within the narrowest Limits the Subject would permit, the true Principles of Civil Society, the real Foundation of Government, and the Grounds of that moral Obligation that ties every Man who would act as becomes him, not only to submit to, but to use his utmost Endeavours in supporting and maintaining the Constitution of his Country, let that Constitution be what it will. For the moral Obligation is precisely the same, under whatever kind of Dominion a Man is born; because the Reasons which enforce it were antecedent to his Birth; and whatever Patrimony, Property or Fortune he has, belongs to him no other way than as a Member of Society, by the Laws of which he was protected in his Infancy through the Power of that Government, to which on this Account he owes a natural Allegiance or Fidelity, which can never be dispensed with any other Way, than by the Subversion of that Government; for then his Allegiance will be due to whatever comes in its Place; be-
cause



On Laws and Government. 475

cause Protection and Obedience are reciprocal, and it is impossible there should be any moral Obligation upon any Individual to bear Faith to a Non-Entity.

The Forms of Government have been various in all Ages, and in most Countries, arising originally from the different Sentiments of Men; who, tho' they agreed in forming themselves into Societies, differed as to the Regulations or Laws for maintaining them, or the Manner in which they were to be executed. But besides this Difference in the Origin of Forms, many, and those almost inexplicable Varieties, have been introduced by Time and Accident. For the Forms of Government, like all other human Contrivances, have been and always must be subject to Change; neither does it follow, that these Alterations are always for the worse, tho' very frequently they are so; for the Circumstances of the People governed being in a continual Flux, it is not easy to conceive how any Government can be so perfectly formed as to remain constantly stable. On the other hand, every Form of Government being the Contrivance of Men, must have natural Defects, which, tho' not perceptible in the Beginning, yet discover themselves by degrees, and are either remedied by subsequent Contrivances, which by the way are so many Changes, or for want of the timely Application of such Remedies, falls by its own Weight, and is dissolved by the Consequences of those Defects that were either not perceived, or could not be guarded against in its primitive Structure.

But notwithstanding these Differences and Varieties, which, as we have said, being brought about by Time and Accident, are so many that perhaps it is not possible to explain them all; yet the original Differences are but few, and even the Modifications of them are very far from exceeding the Limits of our Comprehension or Explanation. The first is Monarchy, which as well as all the rest is a *Greek* Term, and signifies in that Language the *Rule of One*, that is, where the supreme Power is invested in a single Person. Of Monarchies however, there are several Sorts; the first is the despotic or absolute, that is, where the Power of the single Person is absolute or without Restraint, and where he has no other Guide in his Administration but that of his own Reason. The Conveniencies of this Form simply considered, are much superior to any other; for if an absolute Monarch is endowed with Abilities suitable, and with Virtues equal to his Trust, his Subjects must be beyond Comparison happy; because he will make their Happiness the End of his Government, and having nothing to restrain his Will, may

very easily and certainly accomplish it. But then the Inconveniences that from the Nature of Man must attend this Form are almost innumerable, and Experience shews us, that amongst the Multitude of absolute Princes there have been in the World, there have been but a few, a very few indeed, that have done any Credit by their Conduct to this Institution. It is however an Error to suppose, that all despotic or absolute Monarchy is a Solecism in Politics, and that there can be none such legally; for the contrary is true, and that in different Parts of the World, and from various Principles. In *China* it is the very Basis of the Government. In *Turkey*, *Persia*, *Barbary*, and *India*, it is the Effects of Religion; for according to the Doctrines of the *Kheran*, the supreme Power is without Controul, and even in *Europe* the King of *Denmark* is legally absolute by the solemn Surrender made to his Predecessor of their Liberties by the People. We have very little room to insist upon Particulars; but before we part with this it is necessary to observe, that tho' in the common Acceptation of Things, an absolute Monarchy is accountable only to God, yet in fact they are also accountable to the People, and even to the Populace. This was set in a clear Light to *Louis XIV.* by his Governor, to whom some young Noblemen, when he was a Child of about thirteen Years of Age, talking of the unlimited Power of the *Grand Signior*, who could take any Man's Head or Fortune in his Empire, he answered like a Boy, *That is to be a King indeed!* His Governor, who had listened to his Discourse, taking him by the Shoulder said, *Sire, have these young Counsellors of yours told you what are the Fruits of such a Government?* The King answered, *No.* *Why then,* replied his Governor, *I will.* After a Series of such fine Actions, these Tyrants become universally odious, and are either knocked on the Head or strangled by the Mob. *Is this, Sire, to be a King?* I see your Majesty is silent, and I will shew you what it is to be a King, and to be truly a King. Then turning to the young Noblemen, *My Lords,* said he, *you have been guilty of a very high Offence, in speaking such Things here; and it is his Majesty's Pleasure, that henceforward you never presume to enter his Royal Presence.*

Another kind of Monarchy is that which is limited, where the supreme Power is virtually in the Laws, tho' the Majesty of the Government, and the Administration, is vested in a single Person. Under such a Government, the Monarch while he administers the Laws, has the same Power and Authority as if he was absolute; but he cannot legally transcend

cend or exceed those Laws, much less can he act against them; and if he does, he incurs the Penalties prescribed by the Laws; or if there are no Penalties prescribed, he will be in the Case of that kind of Monarchs, of whom we are to speak hereafter. All limited Monarchies are of two Sorts, either Hereditary, where the regal Power descends immediately from the Possessor to the next Heir of Blood; or Elective, where the Choice depends upon the whole Body of the People who are free, as in *Poland*; or upon those in whom the Constitution vests the Power of Election, as in the *German Empire*, and as some Writers say, in the *Grandees of Persia*. This Right of Election again, is sometimes absolutely free, as of late it has been in *Poland*; and sometimes it is restrained to the Royal Family, either by Law, or Custom which has the Force of a Law, as of old in *Poland*, where for many hundred Years the next in Blood of the Royal Family was chosen, and so the next Heir took the Crown, which yet was not an hereditary, but an elective Monarch. The Conveniencies of an hereditary Monarchy are a clear and uninterrupted Succession; so that the Right to the Crown is known to all, and upon the Demise of the reigning Prince, the Royal Authority vests instantly in his Successor; whence the Maxim in the *English Law*, *that the King never dies*. The few Inconveniencies that attend this Form are Minorities, and the Descent of the Crown sometimes to Persons who make an ill Use of their Authority; but as all Forms are subject to some Inconveniencies, so these, how grievous soever in particular Cases, are perhaps the lightest to which any Form is liable. The Conveniencies of an elective Monarchy, besides the avoiding those Defects which are supposed to be in hereditary Royalties, are the maintaining a constant Succession of worthy Princes, and allowing Time in every *Interregnum* to alter and reform the Covenant made at the Time of his Inauguration between the King and his People. As for the Inconveniencies to which this Form is exposed, they are really greater than any to which hereditary Monarchies are subject; for to prevent Kings from having the Power to do Mischief, they are so restrained as to want that of doing Good; and that Vigour in Action, which is the great and essential Benefit of this kind of Rule, I mean of a single Person, is almost enervated or wholly lost in elective Monarchies. Besides, whereas the Inconveniencies of an *Interregnum* are entailed upon this Government, which is torn by Factions in the Life-time of a King, and of Necessity delivered

delivered up to Discord and Confusion by his Death ; so that to avoid these Inconveniencies, the hereditary Form is either admitted by Law, or received by Custom, when such Kingdoms are in their best Condition, as was formerly the Case of *Poland*, in past Times of *Denmark*, and of *Sweden* in the present.

The third Sort of Monarchy arises from the Corruptions of the second, and in its Appearance resembles the first ; in short, it is a Tyranny where the Power is not invested in the Possessor, but seized by him, so that he holds it by Force and not by Law, and consequently is not an absolute Monarch, but one acting as such, without a Right to act so. There is this Distinction between a Usurper and a Tyrant, that the former intrudes into all that he possesses in open Violation of the Constitution of his Country ; whereas the latter may from being lawfully a King, become voluntarily a Tyrant, by exceeding those Bounds that are set to his Authority by the Laws which made him a King, and which Laws require Obedience to him as a King, from which when he swerves, tho' he may force Submission, yet he ceases to have any Title to Obedience. It is universally allowed, that every Man has a Right to resist a Usurper, and indeed this flows from the first Principles of Government ; but it has been thought not so clear, how far Resistance was justifiable against a Tyrant. It is our Happiness to live in Times when such Questions may be examined with Freedom, and decided with Safety ; because we have a King upon the Throne from whose Virtues, were he an absolute Monarch, we have nothing to fear, and from whose Wisdom we are satisfied that he desires no greater Measure of Power than the Laws have assigned him. This Question then in general admits of a plain Solution ; it is impossible for a lawful Prince to become a Tyrant, but by exceeding the Limits of his legal Authority ; and as this can hardly be done without the Advice, so it is impossible it should be done but by the Consent and Concurrence of his Ministers ; and as these may be punished in every limited Government for the Excesses they commit, whatever Orders they may plead in their Excuse, so the Punishment of these is the most effectual Bar to Tyranny, at the same time that it may be done without offering any Indignity to Majesty, towards which it is not the Duty only, but Interest of every free People to behave with the most sincere Respect, and the profoundest Reverence. It has been a Question, whether the hereditary Successor of a Tyrant might not legally possess the Power which his Predecessor had assumed ;

and it is a Question still agitated in some Countries, the Monarchs of which have for a long Series of Time been extending their Power at the Expence of the Liberties and Properties of their Subjects; but as the Discussion of this might appear too assuming in us, and as it does not seem absolutely necessary to the Subject, it may be sufficient to observe, that as the End of all Forms of Government, and of Monarchy, among the rest, is the Welfare of the Whole; so it is not easy to conceive, that Obedience is ever legally, that is, rationally due to a Power that acts in direct Opposition to this primary and indispensable Maxim. There are some Writers who have carried their Notions on this Head higher, and others lower, but in most Cases this has been from some particular Biass, in regard to a Point either in View or in Fact: but as we are under no Influence of that kind, we endeavour to deliver the plain Dictates of Reason, in the natural Language of Truth.

The second Original Form of Government is that stiled *Aristocracy*, which is another *Greek* Term, and signifies properly the Government of the better Sort. There are several *Greek* Authors who prefer this to all the other Forms of Government, supposing that the public Affairs can never be so well administered as by a Senate, or a select Number of wise and noble Persons; the principal Business of whose Life is the Study of true Politics, and the Means of maintaining the Credit and Welfare of their Country. It sometimes happens, that in such a Government as this, the Majesty of the State is transferred upon a single Person, either for a certain Time, or for Life, and yet the Government remains an *Aristocracy*; because that single Person, tho' so stiled, is not a Prince, but rather represents a Prince, as the Doge or Duke of *Genoa*, who continues in his Office two Years, and the Doge of *Venice*, who is for Life: but the Power remaining in the Senate, both Governments are reputed, and indeed are properly speaking *Aristocratical Republics*. The great Excellency of this Form is, that it is extremely well calculated to resist foreign Invasions, and domestic Commotions; for where a Number of the most wealthy and potent Citizens are so deeply interested in the Support of the Government, by having a Share in it, they will certainly act strenuously in its Defence both at Home and Abroad, and will exert themselves to the utmost in the Cause of the Public, which at the Bottom is their own; so that we here see the true Reason why *Aristocracy* will last longer than other Forms, and this I take to be the principal Cause why many have preferred

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this to any of the other Forms. Yet it is very far from being free from Inconveniencies; for in the first place, the Subjects of such a Government are always treated with great Severity; in the next place, extraordinary Abilities, and even extraordinary Virtues, are dangerous to the Possessors, from that constant Jealousy inherent to those who have the Administration in such a State; and lastly, from that unnatural Restraint of Merit, which allows no adequate Reward to such as distinguish themselves in the Service of the Public, if they have not the accidental Advantage of Birth; besides, there is another great and indeed perpetual Disadvantage incident to this Form, and that is, Cabals among the Nobility, which when they rise to a certain Height corrupt and destroy it, by restraining the Exercise of the Administration to a very few Families. And this the *Greeks* called an *Oligarchy*, which is the same thing with respect to an Aristocracy, as Tyranny is in regard to Monarchy; for tho' the exterior or apparent Form of the Government remains, yet the interior and legal Establishment is actually lost: and this with the additional unlucky Circumstance of its being very difficult, if not impossible, to recover or restore it; as the People, who have no Share in the Government, seldom think themselves concerned so much as to endeavour the restoring it.

The third original Form is called *Democracy*, which like the rest is a *Greek* Term, and signifies the Government of the People; for under this Form every Citizen when he has attained to proper Qualifications to recommend himself to the public Choice, is intitled by Virtue of that Choice to a Share in the Government. We need not wonder therefore, that this Form has always had many Advocates, that it has been presented in the fairest and most plausible Colours; and that it has been cried up as of all others the most favourable to Virtue, Merit and Liberty. At first sight indeed it appears so to be, but a very little Consideration will shew us, that it must be subject to many and great Inconveniencies. While the Government is small and low, a Democratic State is generally in a happy and flourishing Condition; that is to say, it is purest, and answers best the End of its Institution, by which it enlarges and dilates itself, arriving quickly at a high Degree of Prosperity, which from the Nature of its Constitution it is not able to bear; for as Aristocracies are commonly subject to Cabals, so Democracies are almost always disturbed with Factions; and the more potent the Republic, the more wealthy its Subjects, the more active those who are intrusted with the Government, so
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much the more liable it is, and must be to such Seditions and Commotions; which after frequent and violent Revolutions, always fatal to many Individuals, end either in a total Subversion of that Form, or in the Corruption of it, by vesting the Power in the Hands of a few considerable Families, and then it becomes an *Oligarchy*; or by a perpetual Fluctuation of Authority, becomes what is called *Anarchy*, which is another *Greek* Term, signifying strictly and properly the Want of Government.

Thus the Reader has seen the original Forms of Government, and their Corruptions; it remains that we inform him, that to prevent the Mischiefs and Confusions introduced by the latter, the best Remedy that the Wit of Man could devise, was to mix and compound these Forms; as for instance, sometimes a Monarchy with an Aristocracy, or in other Words, setting up a King and Nobility, which seems to have been the original Government of *Rome*, and is at this Day that of *Poland*, which is at once a Republic and a Monarchy, and differs from the State of *Venice* in this, that the King has not only the Title, but many of the Prerogatives of a Prince; whereas the Duke of *Venice* has few or none. Sometimes an Aristocracy and Democracy were joined together, of which various Instances occur in ancient History; for such at some times were the *Athenians*, and such were the *Carthaginians* almost always. The Republic of *Holland*, when without a Stadtholder, is of this Nature; as are most of the Seven Provinces distinctly considered, and some of the Cantons of *Switzerland*: But others again, such as *Basil* particularly, are pure Democracies; and the same may be said of most of the free Cities in the Empire. Sometimes all the three Forms were blended together, as in the *Lacedemonian* State, where there were two hereditary Kings at a Time; a Senate, which represented an Aristocracy; and the *Ephori*, who were Magistrates chosen by the People. So again the *Roman* Republic, in which the Consuls in some measure, and the Dictators much more, had the State of Princes; the Nobility composed the Senate; and the People had their Assemblies: and as the constant Guardians of their Rights, Magistrates of their own Appointment, called *Tribunes*. This kind of Mixture seems to obtain at this Day in *Sweden*, where tho' the Administration of Affairs is in the King and Senate, yet the last Resort is in the Dyet; to which Deputies are admitted from the Clergy, the Citizens, and the People.

We must readily grant, that these compounded Forms of Government have, generally speaking, some considerable Advantages over the simple or original Forms, as they spread the Basis or Foundation of the Constitution wider, and make it consequently more firm: As they draw to themselves the principal Conveniencies of every Form, such as the Lustre of a Court, the Grandeur of Nobility, the Ease and Freedom of the People; as they are better guarded against the common Misfortune of every Form of Government, one Part of the Constitution ballancing the other; or if it be more complicated, the Strength and Authority of two Branches being united against the third, if the Members thereof should exceed the Bounds of their allotted Power, to the Prejudice of the other Parts of the State. In consequence of these Advantages, mixt Governments generally increase in a regular Manner, and by slow and sure Steps, the Benefits they receive from such Augmentations are not partial, but universal; so that it is not the King or the Nobles barely, that are benefited by such an Augmentation, but the Commonwealth in general; and every Member of the Body Politic being properly and proportionably nourished, the whole grows up equally, and consequently acquires the greater Strength. This enables it to resist with greater Force, either the Weight of foreign Invasions, or the Struggles of domestic Seditions; and this is the true Cause why mixt Governments are so lasting, and often recover their old, sometimes more than their old Strength, even when the wisest and most penetrating Judges think them on the point of Ruin from their seeming Decay. Thus the Kingdom of *Sweden* delivered itself from its fatal Conjunction with *Denmark*, and by another bold Stroke, prevented that Country from becoming a Province to *Poland*. Thus the *Portuguese*, when all the World concluded they were undone, threw off the Yoke at once, and by setting the Duke of *Braganza* upon the Throne, revived the Phoenix of their ancient Constitution from its own Ashes. Thus the States of the *United Provinces* in 1672, recovered when at the last Gasps, by reviving their old Constitution; and this with the like Success they have again practised in 1747; so that we may safely affirm, that mixt Governments are the most permanent, and enjoy their vital Principles longer than any other.

But if we should add to this, that such Constitutions are free from all Inconveniencies, we should mislead the Reader, by affirming a most notorious Falshood. For as they are composed of the original Forms, and reap many Benefits from
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that Composition, so they stand exposed likewise to the Inconveniencies attending each of these Forms, and sooner or later feel every one of them in their Turns; as for instance, the History of *Sparta*, exclusive of foreign Wars, contains very little else than the Struggles of one Part of the Constitution against the other; for sometimes the Kings laid very deep Designs for introducing arbitrary Power; sometimes the Nobility practised against their Kings, and either brought them to violent Ends, or forced them into Banishment: and at last the *Ephori*, under colour of promoting Liberty, weakened the Foundations of the State to such a Degree, that it sunk into Anarchy, and never recovered its former Lustre. The *Romans*, who copied that Constitution in theirs, met with the same Fate; sometimes from a Jealousy of their first Magistrates, they increased their Number, and instead of two would have ten; which so far from preventing, hastened the Evil, and brought upon them at once, what perhaps they had otherwise never felt. The Struggles between the Nobility and the Commons lasted through a long Course of Years; sometimes the former drove the latter to Despair; sometimes the latter brought the most distinguished of the former to ignominious Deaths, or forced them into Exile. The Tribunes, created purposely to prevent Confusion, were almost always the Authors of it; and thus the Power of the Nobility being broken by that of the People, made way for the perpetual Dictatorship, until at last, all Parties agreed to repose the Power of the Commonwealth on a single Person, when the Constitution was too weak to sustain it according to the ancient Forms.

If we were to examine the mixt Governments of later Times, we should find the Gradations much the same; for in most of them whenever a Prince arises of tolerable Abilities and great Ambition, he seldom fails of drawing into his Party many of the Nobility, and laying hold of some convenient Opportunity, springing either from foreign Wars, or domestic Commotions, procures an Army sufficient to awe the People, and to protect his Instruments from the Punishments they might otherwise meet with, from encroaching on the Constitution. In the Reigns of weak Princes again, Factions arise amongst the Nobility, and some great and restless Spirits by successful Struggles through Disturbances of their own creating, triumph over their Adversaries, and raise up a short-lived Power, destructive perhaps to themselves, but always to their Families. When by such Factions and Cabals, the Nobles have in one Age broken and destroyed their Power

by striving against each other, and thereby deprived their Prince of his natural Support; the People, who have been all along Gainers by such Contests, in the next Age begin to find their own Strength, and taking some of the poorer and more discontented of the Nobles for their Heads, aim at Innovations in their turns, till after a Series of Revolutions, by which their Power is likewise broken, and their Wealth exhausted; like the Sea after a Storm, the Commonwealth grows once more calm, and all Ranks of People concur in their Endeavours, to replace and restore what in their Madness they had broken and destroyed; and in this perhaps they succeed once or twice; but Bodies Politic, like natural Bodies, are much worn by such kind of violent Distempers, so that a Repetition of them is equally fatal to both, notwithstanding the original Strength and Soundness of either.

As this Account of the Changes and Alterations that happen in most mixt Governments, is drawn entirely from the Consideration of what has really happened, so the intelligent Reader, from the attentive Consideration of it, will very easily perceive, that the Power, the Wealth, the Happiness of a People, instead of depending, as is commonly believed, on the Form of their Government, leans in reality much more upon the Administration of the Government, let the Form of it be what it will. For it may with great Truth be affirmed, that there is none of the Forms either simple or compound, the corrupted Forms only excepted, which may not be so administered as to secure the Welfare of the Society. For in an absolute Monarchy, where either the Prince is himself blessed with great Endowments, or allows a Minister to govern in his Name who has those Qualities, the whole Extent of his Dominion feels the salutary Effects, and this is presently attributed to the Nature of the Government, tho' it proceeds, in fact, from the Talents of a single Person, or of a few wise and able Ministers. It is the same thing in a limited Government; if a King is content with that Share of Power assigned him by the Laws, or has Wisdom enough to conceal the Methods he takes to enlarge his Power; and if he employs in their several Stations such of the Nobility as are most capable of serving the Public, while they out of a just Regard to their Prince and the Commonwealth, shew such a Tenderness for the Privileges of the People, as by preventing Disputes, keeps the whole Machine of Government in a constant and regular Motion. This too will be attributed by the great Vulgar, and the small, to the Excellence of the Constitution, and it will be left to Posterity to

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discover that it was in reality owing to a right Disposition in the great Men that lived in those Times. Lastly, the Case is the same in Republics, where almost all depends upon the Prudence and Integrity of those who govern; for these Men knowing by Experience both the Force and the Feebleness of the Constitution, will always take care, that the former shall appear to their Subjects in the fullest Light, and will hide the latter as much as they can.

It would be tedious, and perhaps unnecessary to enter into the Detail of the true Reasons why in all Histories, in most political Discourses, and in many of the best Memoirs that are extant, so much is attributed to the Constitution, and so little to those who administer it. But of this, the most potent and vigorous Cause is that Spirit of Envy and Detraction which too generally prevails, and inclines the greatest Part of Writers rather to commend Governments than Governors. This however is extremely detrimental to Mankind, inasmuch as it deprives of their just Reward those who have been the greatest Benefactors to their Country, and robs Posterity of that Benefit which otherwise they might enjoy, from the setting in a full and true Light such illustrious Examples. But we must have a care of supposing from hence, that there is little or nothing due to Constitutions, and thereby lose our Reverence for them; for this would be running into the contrary, and yet no less dangerous Extreme. For Experience will shew us, that the wisest and best Princes, the ablest and most prudent Statesmen, have always shewn the greatest Regard for the Constitution of their Country, and have been of all others the most careful to preserve and to transmit it entire and unhurt, to their Successors. Such Men will sometimes repair, but very seldom or never, unless compelled by absolute Necessity, alter or change it. To say the Truth, the greatest Excellency of a Constitution, which at the same time is the great Secret of it, is the concealed and hidden Power it has of recovering and restoring itself, when either by the Error of Governors, a Concatenation of untoward Accidents, or the restless Spirit of its Subjects, it has been thrown into Confusion. This is chiefly discerned in mixt Governments, where either from the Sagacity of the first Contrivers, or from a lucky Concurrence of Incidents, the Frame is so constituted, as when seemingly in danger of breaking by a sudden and somewhat violent Spring, to settle and restore itself. In process of Time indeed, and by repeated Experiments of this kind, the Spring is weakened, and by degrees loses its Force; but still it is a great Happi-

ness where the Constitution has originally this internal Efficacy, and those penetrating Patriots who can see and observe it, derive from thence those Hopes that often contribute to assist this Operation, and to save a sinking State, even against the Expectation of the Generality of its Subjects.

To conclude, as the great End of all Government is the Happiness of those that live under it, so it is certain, that the only solid Foundation of this Happiness must be laid in the Wisdom and Probity of the Governors. Hence it comes to pass that the Education of Princes is a thing of such high Importance to the Welfare of a State; that the raising Men of Capacity and Honesty to great Employments, is also so essentially requisite; and hence above all, arises the Necessity of a general Prevalence of public Spirit through all Ranks and Degrees of Men. With these there is no Form of Government, either simple or mixt, that may not last long and appear with Lustre; but without these, no Constitution can possibly secure the Peace and Welfare of a People. A large Patrimony cannot preserve a Spendthrift from Want; nor will any Estate, how well settled soever, resist for a Continuance a Spirit of Dissipation. It is the same thing with respect to the Public; as Virtue declines, and Corruption prevails, the Strength of the State is weakened and impaired; and tho' the outward Forms of the Constitution may remain long, as some look well in the Face even to the last Period of a Consumption; yet Effects will follow their Causes, and a profligate People must as necessarily sink into Slavery and Distress, as a debauched Person into Want and Misery.

C H A P. III.

There is no Footstep in History of any absolute Monarchy established in this Island; the ancient Britons were a free People, governed by Princes, who had a limited Authority; the Saxons were also a free People; the Nature of their great Councils, and the Manner of making and enforcing Laws, with the Changes that happened during their Possession of this Country; the Danes more barbarous than the Saxons, but a free People notwithstanding; the Alterations made by the Normans, always considered as Grievances, and by Degrees were reformed, and taken away by Authority of Parliament.

IT is generally said, and indeed not without Reason, that the Accounts we have of the ancient *Britons* are very barren, and not much to be depended upon. This however is true only in an historical Sense, that is to say, it would be a very difficult, if not impracticable thing, to collect and to digest into tolerable Order the Story of the ancient *Britons*; but with regard to the Point which we are to consider, there are not either Materials or Authorities wanting. We have *Gildas*, an ancient *British* Writer, and long before him we have the Writings of *Cæsar* and *Tacitus*; and from these we are able to collect some tolerable Account of the Nature of their Government. They were divided into several Principalities, which were so many distinct Estates, in the ruling of which, Princes were directed by general Councils, called in their Language *Kifrithin*, which has very near the same Signification with our Word *Parliament*. The Members of these ancient *British* Councils were, the Princes, their Sons, the Edlins of princely or noble Race, the Druids, their Priests and Lawyers, and the Governors of the People; all met in Council armed, except the Druids, who, from their Function, were exempted from Service in the Wars. Young Men they did not admit till they were esteemed of Ability of Mind and Body, to be fit for Council and War; and then the President in Council delivered to such young Man a Spear or Partisan, from which time he was a Member of the Commonwealth, and fit to be appointed or chosen to Council, Governor of the People of a Village or District, or a Leader in their Armies. In these general Councils, all Matters were proposed by the Prince, and

were then explained and debated upon by the Druids ; last of all, the Point was decided by all the Members by clattering their Spears together if they approved, or by striking them upon the Ground with a rude Noise if they disapproved the Motion.

In these several Councils the *British* Laws were made for maintaining Peace, and preserving Property, and the Execution of them committed to the Druids, who were Judges in all Cases sacred or civil. These Laws were carried from the Council in the Memories of the Druids, for it was then strictly *Lex non Scripta* ; and such as inclined to learn the Laws went to the Schools of the Druids, where by frequent Repetitions, they imprinted them in the Memory of their Pupils. In reference to ordinary Jurisdiction, the Street or Village-Court, was held every Month, in which the Druids presided, and if any Man disobeyed their Decrees, he was excluded from their Sacrifices. When the *Romans* invaded *Britain* under *Julius Caesar*, the Princes met together in a great Council, and chose *Cassivelaen* to be their Commander in Chief. When *Claudius* afterwards came hither on the same Errand, the *Britons* were divided amongst themselves, as *Tacitus* tells us, and so became an easy Prey ; and it is remarkable, that the same Author, speaking of the *Germans* and *Gauls*, from whom all agree that the *Britons* derived their political Notions, says, that amongst them smaller Matters were left to the Decision of their Princes, but things of greater Moment were consulted of by all, that is, were debated in general Assemblies.

While the *Romans* continued in *Britain* these Councils ceased, but the *Britons* were permitted to hold their Village-Courts for the Conveniency of the People. But when the *Romans* withdrew and deserted the Island, the *British* Princes resumed their Authority, and their ancient Manner of Government, as appears by their Conduct when they were invaded by the *Picts* and *Scots* ; for then they called a general Council, in which they chose *Vortiger* for their Chief ; and this Measure not proving successful, they directed him to invite over the *Saxons*, which he did. But these Auxiliaries soon turned their Swords upon their Friends, and in the Space of about fifty Years, drove the *Britons* into the mountainous Parts of the Island, and took Possession of the rest of the Country themselves. When the Wars were pretty well over, and they began to form regular Principalities, we find that the same Model of Government prevailed ; and these great Councils were held by every one of the *Saxon* Kings, for making Laws and
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other important Purposes of Government, which Councils were by them stiled *Witenagemote*, the Members of which they were composed *Wita's*, that is, Sages, and their Acts *Geradniffe*, or wise Laws; so that here the Reader sees plainly, that our *English* Ancestors were as far removed from being Slaves as the ancient *Britons*, of whom the Historian *Dion Cassius* in the Life of the Emperor *Severus* says, that amongst them the People always retained the supreme Power.

It may seem strange, that after conquering the *Britons*, the *Saxons* should take up their Form of Government; but this will be no difficult thing to conceive, when we consider that the several Chiefs among the *Saxons*, were so many joint Undertakers in their Expedition against *Britain*; and that their Commander in Chief was only the first Man amongst his Equals by their Consent; when therefore he assumed the Title of King, those Chiefs became his Collegues, were termed *Thegnes* or *Thanes*, and in *Latin*, *Capitanei*, from their having a Capital Right in the *Britons* Lands. These Collegues and their Descendents were those *Saxon* Nobles who were the Members of the great Councils, the Suiters of the Court of the Grand-Seignory of the Kingdom, all Nobility at that Time arising from Possession. The *Saxon Capitanei* in their Portions of Land held Courts, and judged their Vassals, and after the manner of the *Britons*, were petty Princes in their own Territories, and obliged the Kings to swear to administer equal Right to all, and to be obedient to all Laws made and agreed to in general Council. *Ethelbert* the first Christian *Saxon* King, was also their first Legislator, and made his Code of Laws in *Witenagemote*, by and with the Advice of the *Wita's*; in which Code was inserted all that could be recovered, or was judged useful and valuable in the *British* Laws, which shews the great Antiquity of our Constitution, how long our Liberties have been preserved, and by what means.

All the subsequent Legislators among the *Saxons*, for there were many of them, and amongst the rest *Alfred* the Great, a Prince whose Valour, Wisdom and Goodness, did real Honour to his Station, proceeded steadily in the same Track, and used their utmost Endeavours to secure and fortify that admirable Constitution, by which equal Justice was done to Men of every Degree. The Laws made by these Princes were very short and plain, and the County-Courts, and other inferior Jurisdictions, kept the People in very good Order; so that their Dominions became very populous, the Happiness of their Subjects was very great, and would have been

been still greater, but for the repeated Invasions of the *Dan*s, who at length got footing in this Island to such a Degree, that notwithstanding all the great Qualities of *Alfred*, he was forced to allow them to fix themselves in a Part of the Country, where they lived under Laws of their own; but Laws that were approved and consented to by King *Alfred*, to whom their Princes did Homage. It is by no means my Design to meddle with the *English* History, but barely to give a Sketch of the History of the *English* Constitution, that it may clearly appear, that the Subjects of this Kingdom who had Property, were always free; for this Reason I shall say nothing of the Struggles between the *English* and the *Danes*, but shall content myself with observing, that when the latter had established their Conquest, they were content as well as the *Saxons*, to establish the old Form of Government, and even to extend and improve it.

Canutus, almost the only Sovereign we had of that Nation, framed a Body of Laws at *Winchester*, at the *Christmas* Festival, *Anno Domini* 1036; in the Preface of which it is said, “this is the Law which *Cnute* King of all *England*, *Denmark* and *Norway*, hath ordained, with the Consent of his wise Men, as well for the Maintenance of his own Dignity, as for the Benefit of his People.” Before this Time all Criminals might redeem themselves, by paying Money to their King, their Lords, or the Person injured; but by his Laws, breaking into Houses, in the manner now called Burglary, open Robbery, malicious or wilful Murder, and betraying one’s Lord, were declared capital Crimes, and not to be commuted by pecuniary Mulcts.

Edward the Confessor, that great and good Legislator, reigned in the Hearts of his People; and the Harmony between him and the great Council of the Nation, produced so great Happiness, as to be the Measure of the People’s Desires in all succeeding Reigns. This King’s Code of Laws was called *Lex Angliæ*, and sometimes *Lex Terræ*, being a Collection of the best of the *Mercian*, *West-Saxon*, and *Danish* Laws, and King *Edgar*’s Laws. Amongst other Advantages it had this, that whereas before his Reign, different Parts of the Kingdom were governed by those three Laws first above-mentioned, which tho’ they agreed pretty well in the Substance, yet contained distinct Penalties for Offences; the whole was now put under one Form, from whence grew the Term of Common-Law; and it was this Sort of Government, together with the Liberties and Privileges derived from it, that the Barons in the first *Norman* Reigns incessantly contend-
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ed to recover, as infinitely preferable in itself to that, which in conformity to the *Custom* of their own Country the *Norman* Kings laboured to establish.

In the time of the *Saxon* Kings, great Councils were held at the three principal Festivals of *Christmas*, *Easter* and *Whitsuntide*, and from thence they were called Courts *de More*. In these the State of the Nation was weighed and considered, old Laws amended or repealed, and new ones made. These were also the supreme Courts of Judicature, where the King with his Nobles heard and determined Appeals from inferior Courts of Justice. *William the Conqueror*, at his Coronation, swore he would preserve the *English* Constitution; he likewise appointed Commissioners to enquire in every Country, and make Report what were the Laws and Customs in King *Edward's* time, and from these Laws he compiled his own Code in the fourth Year of his Reign. He not only held the Courts *de More* as his Predecessors had done, but fixed the times of his Residence, so as to be at the Palace of *Gloucester* at *Christmas*, at *Winchester* on the *Easter* Festival, and on *Whitsuntide* at *Westminster*; at all which Times and Places, his Barons and Tenants *in capite* attended in course. As to the civil Rights of the People, he left them as he found them, to be heard and determined in the Court Baron, Hundred, and County Courts according to ancient Usage.

In the last Year of his Reign he made another Code of Laws very different from the former, and which wrought a considerable Change in the Constitution. By this Law he settled his Militia in such a manner, as to have always above sixty thousand Knights or Horsemen ready to serve him upon any Occasion. To make the Support of his Government their Interest, he consented that the Grants of their Lands should become hereditary to them and their Heirs, upon Condition of Service, Faith and Obedience, and that nothing should be demanded of them farther than their Service; he also provided, that their Tenants should pay them due Rents and Services according to Custom and Contract, to enable those Knights to perform their Services to the King; and for the Encouragement of these Sockmen, as they were called, it was ordained, that as long as they paid their Rents, and performed their Services to their Lords, they should not be turned out of their Farms, which brought this kind of Sockage Tenure into some degree of Certainty and Freedom.

His Son *William Rufus* swore to keep the old Laws of *England*, but kept them not; Law lay asleep in his Time, he governed according to his own Will, and the Love of Money governed him. *Henry I.* was elected by the Clergy and Nobles; he confirmed the Laws of King *Edward*, held the Courts *de More*, and was a tolerable Prince. King *Stephen* was also elected, he took an Oath to govern according to the Law, but broke it the greatest Part of his Reign, in the latter Part of which, however, he was a great Reformer, and soon after he grew good he died. King *Henry II.* redressed many Grievances, and the Laws by which he governed were made in Parliament; he had great Struggles with the Clergy, who endeavoured to render themselves independent, and it was with much Difficulty he kept them so much within the Bounds of their Duty as he did. *Richard I.* was a very arbitrary Monarch, and raised vast Sums upon his Subjects, not only without but against Law. His Brother *John* followed his Steps, till he threw the Nation into a civil War, by which he was obliged to grant *Magna Charta*, or the Great Charter, or Charter of Liberties, and the Charter of the Forests, by which the Barons obtained so great Power to themselves, as in a great measure changed the Constitution from a Monarchy to an Aristocracy. The Disputes about this Charter often renewed, and as often cancelled, kept the whole Nation in Confusion during this and the next Reign of *Henry III.* out of which it was recovered by his Son.

Edward I. may be truly stiled the *English Justinian*, both Statute Law and Common Law obtained a great Perfection in his Time; to his Reign is justly ascribed the Honour of establishing methodical Proceedings in administering Justice between Man and Man, for Pleadings, Resolutions and Decisions grew regular and rational; good Laws he offered to his Parliaments for their Confirmation and Consent, and when they passed into Laws, he made Choice of learned and upright Judges to put them in Execution: Prudently without Noise, and by gentle Steps and Degrees, he abrogated many bad and inconvenient Customs and Usages, both in the Superior Courts, and in the Courts of the great Men, and substituted such regular Methods, as by length of Time and Experience had of their Aptness and Convenience, have stood and been used ever since without any great Alteration, and are now, says the learned Chief Justice *Hale*, as it were, incorporated into and become a Part of the Common Law of *England*. The old *Saxon* and *Norman* Statutes of his Predecessors



On Laws and Government. 493

Predecessors were short, positive Institutions to correct, and by Mulcts to punish the Vices and Crimes that were prevailing at the time of their making, and many of the Methods of putting them in Execution local, differing in one Place from what they were in another; but in this King's Time, the Sun-shine of Reason and Uniformity broke forth into great Lustre. In his Time likewise the Law was so much mended and altered, that the old Coat was but just perceivable under the several new Pieces set upon it by his learned Improvers of the Law. The Statute Laws, though short in Comparison with later Acts of Parliament, yet were very clear, and fully expressive of the Sense of the Legislators.

It was by this Prince also, that Parliaments were brought into that Order in which we see them, and that Knights, Citizens and Burgessees were made essential Parts of this Assembly. His Son *Edward II.* acted a Part very different from that of his Father, which after drawing many Misfortunes upon his Subjects, brought the heaviest of all upon himself, being deposed and murdered through the Prevalence of that corrupt and factious Spirit, which he had but too much encouraged. His Son *Edward III.* was in every respect a great and glorious Prince; he made the Enemies of this Nation feel the Weight of that Power which he derived from the Confidence and Affection of his Subjects; but his Grandson *Richard II.* like his Great Grandfather, made his Minions his Ministers, and by endeavouring to extend his Royal Prerogative, lost his Regal Dignity, and was soon after cruelly and basely murdered.

In all the Reigns from King *John* to that of *Richard II.* the Disputes continued between the Barons and the Crown, sometimes with more, and sometimes with less Noise; neither does it appear that any of our Princes were Politicians enough to contrive a Method for ridding themselves of what was at once a Check upon them, and in some measure a Burthen upon the Nation. The Predecessors of King *John*, and King *John* himself, seem to have had a Notion by splitting the great Tenures, to have abated this Evil; but instead of that, they increased it; for the smaller Barons were as tenacious of their Privileges, as the greatest Peers of the Land. King *Edward I.* took infinitely a better Method, by fixing and establishing the Rights of the House of Commons, of which some of his Successors would have taken Advantage, but they went about it a little unskilfully, and the Commons out of Modesty declined the Offers that were made then. The Barons saw however, that it was very
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inexpedient for them to continue their old Quarrels with the Crown in the manner they had hitherto done, and therefore they took another Method; and during the Disputes between the Houses of *York* and *Lancaster*, made use of the Cloak of Loyalty to cover their Ambition, siding now with one Prince, and then with another, as would best serve their turns; of which the Reader will find indubitable Proofs in the *English* History during that unhappy Period, in which Multitudes of brave and honest Men sell Sacrifices to the delusive Artifices of the Ambitious.

But when King *Henry VII.* came to be fixed upon the Throne, he saw and resolved to remove this Danger. He is generally looked upon to be one of our wisest Princes, and I think the most extraordinary Proof he gave of his Wisdom was, the Method he took in letting down the Nobility; for seeing that Luxury began to prevail, he opened a Passage by Law, for the Nobility to dispose of their Estates; and this being once done, the Commons soon became much more considerable, by acquiring Property in Land, which before they had little Opportunity of doing; and this no doubt was a great Encouragement to Industry, and a general Benefit to the Nation. His Son *Henry VIII.* was accidentally, tho' not intentionally a Friend to Liberty. He demolished in a great measure the exorbitant Power, and spread abroad the excessive Wealth of the Church; he was a Prince of great Abilities, and therefore loved, encouraged and employed Men of Abilities; and the same Rule prevailed with his whole Family, and was one of the principal Causes of the Felicities of Queen *Elizabeth's* Government, which makes so great and glorious a Figure in our Histories. By this means the Foundation was laid for that extensive Liberty which has been since acquired, and is now enjoyed under a Government, which when well administered, is without doubt one of the best constituted that ever prevailed in any Age or Country, and which can never be subverted, but by the Abuse of that Liberty which is its greatest Grace and Glory.

I call it the best constituted, because I know of none either ancient or modern, that ever admitted so much Freedom. Other Governments, more especially Republics, may pretend to more; but in reality, no Government either has or ever had so much; and as for those Republics that subsist at present, they cannot enter into any Degree of Comparison with it; for they are all built upon much narrower Bottoms, and consequently are so insecure, that such as administer the Government are in a perpetual State of Jealousy

lousy and Apprehension; whereas here the Benefits of a free Government are so widely, I was going to say universally extended, that it is every Man's Interest, and every Man of common Sense must see that it is his Interest, to preserve this Form to the utmost of his Power. Fear in those who administer a Government is productive of the worst Consequences, more especially Severity; but this loses its Nature when lodged in the Breasts of the People, and becomes Loyalty to the Constitution, of all others the noblest kind of public Spirit. This, tho' they never had so great Cause, was highly conspicuous in the *Spartans, Athenians, Romans*, and other free Nations of Antiquity; it has been no less conspicuous here, and it is hoped it ever will be so, in regard to the superior Excellency of that Government which both deserves and promotes it; a succinct Description of which, that the rising Generation may have some Notion of their Duty in this respect, we shall in the next Chapter endeavour to set forth.

C H A P. IV.

Of the Structure and Excellency of the British Constitution; the Nature of the Regal Dignity, the Fulness of the Prerogative, and the Reasonableness of its Limits; the Dignity, Privileges, and Splendor of the Nobility, and the Usefulness of their Situation to the State; the Freedom and happy Condition of the British People, the Nature and Value of their Immunities, and the Security they have for their Liberties. Of the Independency of the several Estates in the Exercise of their respective Rights, and how this is perfectly reconcilable to the Connection of the several Parts of the Constitution.

THERE is something extremely natural, and nothing blameable in that very high Opinion which prevails amongst most Nations, in favour not only of the Country, and the Produce of the Country which they inhabit, but of its Government also; and it is generally thought, that the People of *Great Britain* have their full Share of this kind of national Vanity. Yet when we attentively consider how beautiful and how regular a Structure that of the *British* Government is, and withal, how agreeable, and how commodious; we shall rather incline to believe, that
People

People would admire it more if they understood it better, than that they are over-fond of it because they possess it. The Truth of the Matter is, that such as value themselves on their superior Understandings, and would be thought the best Judges of these Matters, are so far from being partial on this Head, that they are very apt to find fault with, and to express their Desire of seeing Alterations made in the Government; so that it is only the ordinary Sort of People that are chargeable with this Weakness of being warmly attached to a Constitution, which nevertheless they are far from comprehending. Upon this I beg leave to remark, that particular Persons have not only particular Notions, but particular Views, and that their Criticisms upon Forms of Government arise too often from those Circumstances; but it is otherwise with the Bulk of the Nation, who judge of the Government they live under, not from what they know, but from what they feel; and therefore when they esteem themselves happy, it is for this simple Reason only, because they are so. Wise Men will not listen to the Voice of the Nation, when they cry out for Change; but I will venture to lay it down as a political Maxim beyond Contradiction, that the Voice of a Nation ought always to be listened to when it is against Change. For the great End of Government is to make its Subjects happy, and the only Way we have to know when People are happy, is to observe whether they are content; for tho' it is very certain that they may be discontented without Reason, yet the contrary is far from being true, for they are never content, or can be so, without a Cause.

In order to be satisfied of this, we will examine into Particulars. We have already shewn that the Constitution of this Kingdom is of great Antiquity, and that it always was in a great measure what it still is, a mixt Government; we have likewise shewn, that till the coming of the *Normans* there were few or no Innovations, and that when these were made by the Princes of that Line, they produced perpetual Contentions. We have observed that *Edward I.* might be esteemed the *Norman* Legislator, and the Father of the People's Liberties; for tho' it may be proved that the Commons sent Representatives to Parliament before his Time, and tho' there are some Footsteps of the like even under the *Saxon* Kings, yet he it was, that in the eighteenth Year of his Reign settled that regular Form which has since continued. We have hinted that *Henry VII.* opened the Way for the Commons to obtain Property, which they have very well improved since; and that *Henry VIII.* demolished the Usur-

Usurpation of the *Pope*, and that kind of Church-Independency which was altogether incompatible with the other Parts of the Government. Whatever Difficulties there were besides, were removed in succeeding Times; and tho' they might be removed with Violence, yet it is a Violence of which we reap the Benefit, and find ourselves in full Possession of that good old *Saxon* Constitution with which our Ancestors were so much in love, together with many, and those very considerable Improvements all made in a legal Manner, and of which nothing but our Madness and the fatal Effects of our universal Corruption can possibly deprive us; so well and wisely is the present Constitution put together.

The Monarchy is indeed limited, but limited in such a manner, that the King may be absolute if he pleases, by doing what is right. He has not the Ensigns, Pomp and Splendor of the regal Dignity only, but the essential Rights also. The Administration of Affairs is wholly in him, he chooses what Ministers he pleases, and it is those Ministers, not himself, that are accountable for the Administration. He is the Fountain of Honour, and the Militia is likewise in him. He has the sole Power of making Peace and War, he coins Money, and, in a word, he does every thing that a good Monarch would wish to do. Yet his Power is not either burdensome, or terrible to his People; on the contrary, his very Prerogatives are favourable to the Nation's Liberties; and it might be demonstrated, that they would be less free if they were more limited, which is an Excellency never reached in any other Monarchy ancient or modern; so that as on the one hand a *British* King has no Temptation to break in upon the Constitution, his Subjects on the other have not the least Reason to wish or desire that the Circle of his Power should be more restrained.

As the King is supreme in all Causes, Ecclesiastical as well as Civil, so this is without the least Prejudice either to the Church or State. The Religion by Law established, is the Christian Faith in great Purity; and the Archbishops Bishops have such a measure of Authority, and such a portion of Revenue, as is suitable to their Dignities, and consistent with their Functions. Order and Decency are thoroughly provided for, and yet Persecution is provided against. The Clergy have all that they can wish, but the Dominion over Consciences is very wisely reserved to him to whom it belongs, that Supreme Being to whom every Man is accountable, and to whom alone he ought to account.

Such as dissent from the established Religion, have the full Liberty of worshipping him according to their Consciences, and the State interposes no farther therein than is necessary to secure that Liberty, and to prevent Bigots of all Religions from persecuting each other. So that wise and moderate Men have nothing to wish in this respect, but that things may always continue in this Condition, and that the Spirit of Religion may shew itself in Zeal for good Works, rather than in Heats about Opinion.

The Nobility of *Great Britain* have all the Power and Splendor that is consistent either with the Safety of others or their own; they are the King's hereditary Counsellors, they make one of the three Estates in Conjunction with the Lords Spiritual, and with them are Judges in the last Resort of all that has been done in any of the Courts below; they enjoy all their ancient Privileges, and some new ones, particularly that of being tried by their Peers in general, and not by such only as the Crown shall think fit to commission; and if they have not so great Authority as their Predecessors the Barons had, yet their Condition is infinitely better secured than it was in those Days, even by this Diminution of their Authority. Such as consider only the mere Outside of things, are apt enough to suppose, that they have lost by the Alterations that have been made in the ancient System; but such as see to the Bottom, clearly perceive the contrary. Their Dignity is so high, and the Prerogatives annexed to it so conspicuous as well as considerable, that it justly remains the great Object of Hope, as well as of Respect; so that it is absolutely impossible, that the Peerage should grow into Contempt, tho' particular Peers may sink their personal Characters by their personal Failings; and it is absolutely necessary that it should be so amongst the Nobility of a free State; for if it was not, all those Inconveniencies would be quickly felt that render *Aristocracies* odious. In *Poland* for instance, the Nobles are a kind of Princes, but then the rest of the People are very much better than Slaves. At *Venice* their Power is exorbitant, and their Insolence intolerable. In *France* the Nobility are haughty enough, and the common People feel in their turn that ill Treatment the Nobility are exposed to at Court. But here in *Britain* very little of this is known, and nothing in comparison is felt; every Man that is free and a good Subject, is safe from the Pride or Caprice of Men of Title, and while he is guilty of no Offence towards them, cannot be disturbed or distressed by them.

Lastly.

Lastly, As to the People in general, they have all the Freedom they can wish, and full as large a Share of Power as they can manage. In proportion as they acquired Property, they have acquired also a Measure of Power proportionable to that Property, no Part of which can be taken even for the public Service but by their own Consent. In former Times, tho' our Commerce was not so great, yet the trading People seem to have had a larger Share in that Branch of the Constitution which belongs to the Commons than they have now, because they were at liberty to chuse such as had no Interest in Land; whereas now the House of Commons is composed entirely of Men who have a landed Interest. It is indeed true, that the great Powers of this House have been gradually obtained; but let it be added also, that they have been fairly and justly obtained, and upon the true Principles of our Constitution, which has always lodged more or less Power in the several Degrees of its Subjects, as they have had greater or less Interest in the common Stock; and in the Nature of things there can be nothing more reasonable, than that those should have the Care of the public Affairs, who have the largest Stake in the public Weal, and consequently must have the greatest Concern for the public Safety.

The Commons of *Great Britain* are considered either in their legislative, or in their collective Capacity. In each of these they have all the Powers and Privileges that the Wit of Man can devise. In respect to the former, there is nothing that can be done by the supreme Power of the Nation without their Approbation; no new Law can be made, no old one repealed, but by their Voice. No Taxes can be levied, unless the Quantity and the Quality be by them settled. No Grievance can be felt but what they may redress, and of which they must be informed; nor is there any Matter so great, or Man so powerful, as to be beyond the Reach of their Enquiries, or the Force of their Impeachments. The Prerogative itself can set no Bounds to either. They are the grand Inquest of the Nation, and no Power can protect the Guilty from the Pursuit of Justice, when managed by them. This is all that ever was pretended to, in the very purest *Democracies*, and was even in them much more easily eluded or defeated, than is practicable in our Constitution.

Again, in their collective Capacity, of what mighty Extent is their Power, or rather what Power have they not? The Knights of Shires are chosen by the Freholders, the Citizens by their Fellow-Citizens, and the Burgesses by such as have a Right to their Votes from the Constitution of their

Such as dissent from the established Religion, have the full Liberty of worshipping him according to their Consciences, and the State interposes no farther therein than is necessary to secure that Liberty, and to prevent Bigots of all Religions from persecuting each other. So that wise and moderate Men have nothing to wish in this respect, but that things may always continue in this Condition, and that the Spirit of Religion may shew itself in Zeal for good Works, rather than in Heats about Opinion.

The Nobility of *Great Britain* have all the Power and Splendor that is consistent either with the Safety of others or their own; they are the King's hereditary Counsellors, they make one of the three Estates in Conjunction with the Lords Spiritual, and with them are Judges in the last Resort of all that has been done in any of the Courts below; they enjoy all their ancient Privileges, and some new ones, particularly that of being tried by their Peers in general, and not by such only as the Crown shall think fit to commission; and if they have not so great Authority as their Predecessors the Barons had, yet their Condition is infinitely better secured than it was in those Days, even by this Diminution of their Authority. Such as consider only the mere Outside of things, are apt enough to suppose, that they have lost by the Alterations that have been made in the ancient System; but such as see to the Bottom, clearly perceive the contrary. Their Dignity is so high, and the Prerogatives annexed to it so conspicuous as well as considerable, that it justly remains the great Object of Hope, as well as of Respect; so that it is absolutely impossible, that the Peerage should grow into Contempt, tho' particular Peers may sink their personal Characters by their personal Failings; and it is absolutely necessary that it should be so amongst the Nobility of a free State; for if it was not, all those Inconveniencies would be quickly felt that render *Aristocracies* odious. In *Poland* for instance, the Nobles are a kind of Princes, but then the rest of the People are very much better than Slaves. At *Venice* their Power is exorbitant, and their Insolence intolerable. In *France* the Nobility are haughty enough, and the common People feel in their turn that ill Treatment the Nobility are exposed to at Court. But here in *Britain* very little of this is known, and nothing in comparison is felt; every Man that is free and a good Subject, is safe from the Pride or Caprice of Men of Title, and while he is guilty of no Offence towards them, cannot be disturbed or distressed by them.

Lastly.

Lastly, As to the People in general, they have all the Freedom they can wish, and full as large a Share of Power as they can manage. In proportion as they acquired Property, they have acquired also a Measure of Power proportionable to that Property, no Part of which can be taken even for the public Service but by their own Consent. In former Times, tho' our Commerce was not so great, yet the trading People seem to have had a larger Share in that Branch of the Constitution which belongs to the Commons than they have now, because they were at liberty to chuse such as had no Interest in Land; whereas now the House of Commons is composed entirely of Men who have a landed Interest. It is indeed true, that the great Powers of this House have been gradually obtained; but let it be added also, that they have been fairly and justly obtained, and upon the true Principles of our Constitution, which has always lodged more or less Power in the several Degrees of its Subjects, as they have had greater or less Interest in the common Stock; and in the Nature of things there can be nothing more reasonable, than that those should have the Care of the public Affairs, who have the largest Stake in the public Weal, and consequently must have the greatest Concern for the public Safety.

The Commons of *Great Britain* are considered either in their legislative, or in their collective Capacity. In each of these they have all the Powers and Privileges that the Wit of Man can devise. In respect to the former, there is nothing that can be done by the supreme Power of the Nation without their Approbation; no new Law can be made, no old one repealed, but by their Voice. No Taxes can be levied, unless the Quantity and the Quality be by them settled. No Grievance can be felt but what they may redress, and of which they must be informed; nor is there any Matter so great, or Man so powerful, as to be beyond the Reach of their Enquiries, or the Force of their Impeachments. The Prerogative itself can set no Bounds to either. They are the grand Inquest of the Nation, and no Power can protect the Guilty from the Pursuit of Justice, when managed by them. This is all that ever was pretended to, in the very purest *Democracies*, and was even in them much more easily eluded or defeated, than is practicable in our Constitution.

Again, in their collective Capacity, of what mighty Extent is their Power, or rather what Power have they not? The Knights of Shires are chosen by the Freeholders, the Citizens by their Fellow-Citizens, and the Burgesses by such as have a Right to their Votes from the Constitution of their

respective Boroughs. It is true, that Clamours are frequently raised of Influence and Corruption, and perhaps those Clamours are not always without Reason; but Influence and Corruption are not Horse, Foot, and Dragoons; no Man's Vote is taken from him by Force; no Man is compelled to betray himself or his Country: so that upon the whole, this amounts to no more than that bad Men are induced by bad Means to do bad Things, in Matters which concern themselves and their Posterity. Yet even against this, almost all possible Provisions have been made by Law; but the Mischief is, that no Law can be devised to hinder bad Men, while they remain free, from bartering or selling their Freedom; because such a Law would actually deprive them of their Freedom. So that upon the whole, this that is thought the greatest Blemish in our Constitution, does the greatest Honour to it, since there is nothing clearer, than that the only Way to enslave or undo us, is left to ourselves. The Constitution therefore has dealt with us as we are dealt with by our Creator, it has made us as free as in their Nature Man can be; and if ever we are enslaved or undone, it must be our own Act, and Slavery and Ruin must be at once both our Choice and our Punishment. To sum up all in a word, every Constitution ancient and modern, has done less for its Subjects than that of *Great Britain*, nor is it possible that any Constitution should do more for their Welfare and Safety than this has done.

There remains yet one thing more to be accounted for with respect to this Constitution, and that is, the Dependency and Independency of its several Branches, about which some Writers have expressed themselves darkly and confusedly, for want of observing a very easy, and a very obvious Distinction. There is in every Branch of the Constitution a separate and characteristic Power as well as a legislative. In respect to the former, each is free and independent: The King exercises his Prerogative without Restriction: The House of Peers as a supreme Judicature, and as the great Council of the Nobles, acts also without any other Restraint than the Usage of Parliament puts upon them: The House of Commons do the same in reference to all the Points that belong strictly and peculiarly to them. In their legislative Capacity strictly considered, it is otherwise; for there is, I will not call it absolutely a Dependence, but a necessary Connection between all the Branches of the Legislature; and this arises no otherwise than from their Relation to, and the inseparable Interests they have in each other, which perhaps might be more fully and
largely

largely explained, if that Explanation were fit for, or even consistent with a Discourse of this Nature. But from what has been said it is easily conceived, that this Connection is no Impeachment of Liberty, since it is from their common Concern for Liberty that it arises.

But the Blessings of this Constitution are not barely confined to the happy Disposition of the several Branches of the Legislature; on the contrary, they extend themselves throughout the whole Scheme of our Policy, and are copied in every Place where any Form of Government, or kind of Jurisdiction prevails; as for instance, in every Town Corporate, there is a Mayor, Bailiff, or other Chief Officer, with Aldermen, or Assistants, and a fixed Representative of the Commonalty. In the Country, the County Court is still held, as are also the Courts Leet and Baron; so that in this respect, we still retain the old *Saxon* Government, or rather, we retain that Form which they borrowed from the *Britons*, and which having subsisted amongst us with very little or no Alteration for near two thousand Years, it is not to be wondered that a high Reverence, a sincere Affection, and an unalterable Attachment for it had been thereby produced, which there is good Reason to hope no Art, no Influence, no Practices of any kind will ever be able to efface.

As to the Administration of Government, or the executive Power of the Constitution, it is by Law vested in the Crown, and is thence distributed by Royal Commissions to such as are by them empowered to administer Justice of every kind to the People; and as those who are thus authorized are bound to respect the Laws, and to act in Obedience to them, (for to this, and this only their Commissions extend) it is evident that every Act of Male-Administration is cognizable and punishable; and therefore there was no Absurdity in the old Maxim of our Law, *that the King can do no wrong*, nor is the Maxim in the least repugnant to Liberty, but on the contrary is its best and most solid Foundation: for if Wrong be done, the wrong Doer is to be punished, for this Maxim of the Law having exempted the King, it is evident that no Commission or Warrant whatever can justify or excuse a Person who acts in Breach of the Laws. This likewise shews the Reason of another Maxim of equal Antiquity and Force, though not so commonly known, *viz. that the King is always a Minor*, that is to say, he is so considered by the Law, and shall receive no Prejudice from any Acts into which he may be either misled or surprized; but those who venture to act

under pretence or colour of Powers thus obtained, shall bear the Weight of their own Offences, without any regard being shewn to that Shadow of Authority, under which they would be thought to have acted. All this will more clearly appear, if we take a succinct View of the settled, legal, and regular Method, in which every Part of the Government is actually administered.

All Acts of State are considered, debated, and resolved in the Privy Council usually held in the King's Presence, and always under the Direction of a High Officer of State, styled the Lord President of the Council. All the King's Commands are transmitted to his Officers, Civil and Military, by the Secretaries of State; but all Acts of a public Nature, and all Instruments of general Concern, pass the Privy Seal or the Great Seal, and are liable to be stay'd at either, till the great Officers intrusted with those Seals are satisfied of the Expediency, as well as the Legality of the Contents. The Lord High Chancellor is the first great Officer of State, and considered in that Capacity, has a very high and extensive Authority, the Nature of which is described and defined in most Cases by Acts of Parliament; and as this great Office is usually executed, either by a Professor of the Law, or one remarkably distinguished by his Learning in that Profession, there is so much the less Danger in his Ministerial Capacity; and indeed Experience teaches us, that many of our best and greatest Ministers, and those to whose Wisdom, Prudence and Probity, the Nation has been most indebted, have been Chancellors.

But besides his Office and Function as a Minister and great Officer of State, the Lord High Chancellor presides in the Supreme Court of Equity, where he relieves such as are without Redress by the strict Letter of the Law, and those also who are distressed by it; for it is a known and settled Principle, that *summum Jus est summa Injuria*, that is, Justice severely administered may become Injustice; and therefore this excellent Method has been found for the Ease and Benefit as well as Safety of the Subject, by which such artful People are reached, as might cover themselves from the Law; and honest Men are delivered from the Danger they might be in of being over-reached by such Persons in Law. For the Dispatch of the vast Business that naturally belongs to this Court, the Chancellor has under him the Master of the Rolls and eleven Masters in Chancery; the former hears Causes, but from his Decrees an Appeal lies to the Chancellor; and to the latter, such Things are referred to be stated and reported,

ported, as may facilitate the doing justice upon a final Hearing.

The Chief Justice of *England*, or Chief Justice of the King's Bench, according as his Commission runs, presides in the Court of King's Bench, and has the Assistance of three other Justices; in this Court are tried not only Criminal Causes, or, as we stile them, Offences against the Crown, but Civil also, which relate to Matter of private Property. The Chief Justice of the Common Pleas, and three other Justices, hear and determine all Civil Causes in that Court, at the Bar of which, none are allowed to plead under the Degree of a Serjeant at Law: The Judges of the Court of Exchequer have the Title of Barons, and he who presides, that of Lord Chief Baron; in this Court are regulated all Affairs in relation to the public Revenue, and it is besides, both a Common Law Court, and a Court of Equity. In the former, the Pleadings are the same as in the other Common Law Courts, and in the latter, they resemble the Proceedings of the Court of Chancery. Appeals from all these Courts in general, as well as from the Courts of Law and Equity in *Scotland* and *Ireland*, are in the last Resort determined in the House of Peers. As for the Distribution of Justice in the Country, it is usually committed to the same Judges, by the Title of Justices of Assize. There are two upon each of the Circuits, one for Criminal, the other for Civil Causes, and except in the most distant of the *Northern* Counties, the Assizes are held twice a Year, which Seasons are commonly distinguished by the Names of *Lent* and *Summer* Assizes. But the County Palatine of *Chester*, and the Principality of *Wales*, have particular Judges, who act distinctly by the King's Commissions; and thus every Part of the Kingdom is open to, and receives the equal Benefit of the Laws.

As to the other Acts of Government, which extend through all the different Parts of the Nation, they are either of a Political or Judicial Nature. In reference to the former, there is in every County a Lord Lieutenant, to whom the King's Pleasure is made known, and by whom it is communicated to his Deputy Lieutenants, and where any Military Force is necessary, to the Officers of the Militia. There is also in every County a Keeper of the Archives, better known by his *Latin* Name of *Custos Rotulorum*, and he recommends such Gentlemen as are proper to be in the Commission of the Peace, and they are constituted Justices, or, as they were anciently called, Conservators of the Peace, which is a very clear Description of their Office; for they have Power by

the Laws to correct small Offenders, and to commit and confine great ones; but as there are a few only of these, in Comparison of the Number of People, there are subordinate Officers in every Parish, such as Headboroughs and Constables, who have a ministerial Power of executing the Justices Warrants, and of interfering by their own Authority upon any open Breach of the Peace. In respect to Bloodshed of all kinds, there is in every County, and by particular Privilege in lesser Districts, an Officer called a Coroner, who is invested with the Power of enquiring, and issuing such Warrants as are necessary to that Enquiry, and of committing, that they may be brought to Justice, such Delinquents as are thereby discovered. In respect to judicial Acts, the proper Officer in every County is the High Sheriff, to whom all Writs from the King's Courts are directed, and who commands the Execution of them by Warrants under his Hand and Seal to his Officers. Thus in a very narrow Compass, the Reader sees, that the full Execution of the Laws is provided for, as well as the Means of procuring its Sentences and Decrees, are open in all Places, and to all Persons, agreeable to the most extensive Notions of natural Justice and common Right.

To enter into the Method in which Taxes are levied, or the Fleets and Armies of the Kingdom directed, is altogether beside my Purpose, which is only to exhibit a general View of our Government, and so give a Prospect of its Structure, without entering into a minute Description of its Parts; I shall therefore conclude with observing, that as our numerous Manufactures, and extensive Trade, afford the greatest Encouragements to Industry, and as the acquiring a Property opens a free Passage to the highest Trusts and Honours that a free People can bestow, so there is no Native of this Country can be possibly excluded from them, who has Merit enough to deserve them; which is that peculiar Privilege that I before mentioned as a singular Blessing, and a particular Advantage of our Constitution, and which is not enjoyed in the same Latitude under any Government, now existing in *Europe*, or, for any thing that appears, was ever enjoyed in equal Extent under any of the Governments, the Forms of which stand recorded in History. This, as it must afford the highest Pleasure, and the greatest possible Satisfaction to every *Briton*, so it ought to fill his Mind with a most tender Affection for his Country, and warm his Heart with the most lively Zeal for its Constitution,

C H A P. V.

A short Account of the principal States of Europe, in respect to the Form of their Government, their Force, and Interest; particularly the Empires of Germany, Russia and Turkey, the Kingdoms of Denmark, Sweden, Poland, &c. the Republics of Venice, Genoa, the Swiss Cantons, and the Seven Provinces; interspersed with various political Remarks and Observations relative to the Balance of Power, and the proportionable Strength of its principal Monarchies and Republics.

THE only thing that seems to be now wanting to satisfy the Reader's Expectation in reference to this Head of Laws and Government, is a brief and general Representation of the most considerable Governments that subsist at this Day in *Europe*, which though we are obliged to deliver in a very narrow Compass, yet from their standing so near each other, and affording thereby an Opportunity of comparing them together, will render them both more agreeable, and more useful to a young Reader, as it will enable him to see at once a kind of political Chart, that will be of continual Service in the Perusal of the History of our own Times, which it imports us to know most, and for the understanding of which, however, we are furnished with the fewest Helps. It may likewise contribute to excite a Desire of being farther and more particularly informed, at the same time that it points out the shortest and easiest Method of conducting and compleating such Enquiries.

To begin then with the Empires that subsist at present, which are in Number three, *viz. Germany, Russia and Turkey*. The Head of the first of these is, properly speaking, stiled Emperor of the *Romans*, to which Rank he was raised without any Accession of Power, from being King of *Germany*. These Emperors are commonly reckoned the Successors of those of *Rome*; but the true and genuine Notion of their Dignity, is to be taken from the Policy of the *Roman Church*. The Popes, when they assumed to themselves the Stile and Title of Spiritual Heads of *Christendom*, found it necessary for their own Security, that the *Christian World* should have also a Temporal Head, and this Honour they bestowed on the then Kings, now Emperors of *Germany*, who for a long time pretended to a Rank above Kings, whom they treated with the Title of *Serenity* only, and if they had been content to
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found this Precedency on Custom and Prescription only, perhaps this had never been questioned, but claiming it as a Right, those Monarchs who were superior to them in Power, thought it below them to be esteemed inferior in Dignity; and therefore long ago subverted this Claim of Right, tho' they are still content to allow the Emperors the harmless Honour of Precedency. His Power in the Empire is very much confined, his Revenue very small, and as to Dominions he has really none in that Quality. He is elected by nine great Princes, whose Ancestors were Officers of the Household to the Emperor, when his Power was much greater. They are from the Exercise of this Dignity stiled Electors, and of these there are three Ecclesiastical and six Temporal; the former of *Mentz*, *Cologne* and *Treves*; the latter the King of *Bohemia*, the Duke of *Saxony*, the Marquis of *Brandenburgh*, the Duke of *Bavaria*, the Count *Palatine*, and the Duke of *Brunswick Lunenbourg*, Elector of *Hanover*. The German Empire, considered as a Republic, is represented in the Diet at *Ratisbon*, in which the Emperor's Commissary presides, and the Elector of *Mentz* directs. The present Emperor is *Francis* Grand Duke of *Tuscany*, born Dec. 8, 1708, and raised to that Dignity Sept. 13, 1745.

The Sovereign of all the *Russias* was, and is stiled in his own Language *Czar*, and if a Woman, *Czarina*, which Titles taken literally, signify no more than Lord or Prince, Lady or Princess, and have been very differently interpreted into the other Languages of *Europe*; for sometimes these Princes have been stiled Grand Dukes, and at others Monarchs. The late Czar *Peter* I. justly stiled the Great, assumed the Title of Emperor of all the *Russias*, which by Degrees has been almost generally admitted, and is not like to be hereafter disputed. The great Prince before-mentioned, was the Father, Founder and Legislator of his Empire; he enlarged it on all Sides at the Expence of the *Swedes*, the *Tartars*, the *Turks*, the *Persians*, and the *Chinese*; he made it equally formidable in *Europe* and in *Asia*; he made it a Maritime Power; in short, he made his Subjects Men, and from being the Scorn and Contempt, rendered them terrible to the World in general. The Government is absolute, but for the Sake of being easier administered, there is a great Show of Authority in the Senate, which is however intirely dependent on the Sovereign. This beyond Controversy is the most extensive Monarchy in *Europe*; the standing Forces are between two and three hundred thousand; the Revenue is not great, but capable



On Laws and Government.

507

capable of being made so; the Religion established is that of the *Greek Church*. The present Czarina is *Elizabeth Petrowna*, Daughter to *Peter the Great*, born *Dec. 29, 1709*, and raised by a sudden Revolution *Dec. 6, 1741*, to the Imperial Dignity which she now enjoys, and of which *Peter Federowitz*, Duke of *Holstein Gottorp*, and Grand Prince of *Russia*, born *Feb. 21, 1728*, is the declared Successor.

We have placed the Empire of *Turkey* last, out of respect to Christianity; the Sovereigns of the *Turks* are hereditary and absolute Monarchs by their Constitutions, but the Abuse of their Power frequently subjects them to popular Insurrections, to one of which the late *Grand Signior* owed his Authority. The *Turkish* Dominions are very large, and the Countries they possess, as fruitful as any in the Universe. The Force of this Empire has been hitherto very great, but at present is on the Decline. The Revenues are large, and as all the Lands are held by military Tenures, so the settled Militia, or regular Troops, are no great Expence to the Government. The *Turks* themselves are *Mahometans*, but the far greater Part of their Subjects are *Christians* of different Denominations. The present Grand Signior *Mustapha* succeeded his Uncle *Oct. 27, 1757*.

As it is necessary to observe some certain Order in speaking of the rest of the crowned Heads of *Europe*, we will begin with the Northern Crowns, and so pass on to the middle and Southern Parts. The Crown of *Denmark*, with the Adjunction of that of *Norway*, may in this Light claim the first Place. It was anciently hereditary and absolute, then it became elective and limited, but now by the voluntary Cession of the People of their Rights, it is become both hereditary and absolute again. The Kingdom of *Norway* is of a large Extent, that of *Denmark* but small; the Country of *Holstein*, and some other Lordships which the *Danish* Monarchs possess in *Germany*, are not very considerable; taken however all together, the King of *Denmark* may be justly considered as a powerful Prince. His Subjects are in Possession of a very beneficial Trade, for they import little, and export much. His *Danish* Majesty has always a good naval Force, a standing Army of upwards of thirty thousand Men, a competent Revenue, within the Bounds of which he lives; and for several Successions, these Princes have been employed in the proper Business of Princes, they study how to make a small Kingdom a great one. The People of *Denmark* are *Lutherans*. The present Monarch is *Frederick V.* born *March 31, 1723*, succeeded his Father in 1747.

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The Kingdom of *Sweden* is very ancient, and has run thro' as many Changes and Alterations of Government, as perhaps any in the World. It has been formerly subject to *Denmark*, sometimes an hereditary and almost absolute Sovereignty, at others elective and limited; at present it is an hereditary Monarchy upon the Basis of a limited Constitution, by which the King with the Advice of the Senate, is intrusted with the Administration, but the supreme Power seems to rest in the Dyet. The *Swedes* are a very martial and a very thinking People, have a strong Passion for Liberty, yet are naturally loyal to their Sovereigns; the internal Constitution of their Country is very well regulated, their Dominions have been much curtailed, and they are restless to recover them; they have a considerable Trade, a great naval Force, and a standing Army of about sixty thousand Men. The *Swedes* are *Lutherans*, and their Church is governed by Archbishops and Bishops. The present reigning King is *Adolphus Frederick of Holstein Utin*, was born *May 14, 1710*, declared Hereditary Prince *July 4, 1743*, succeeded to the Crown *April 6, 1751*.

The Kingdom or Republic of *Poland*, in Point of Dominions is very considerable, whether we consider the Extent or the Value of the Country. The Government has been always elective, but for a long Series of Time, the next Heirs were constantly elected. At present it is considered as an elective Monarchy, blended with an Aristocratical Republic, in which the Limits of Power are very uncertain between the King and the Nobility; but the common People are as near Slavery as it is possible to conceive them. The Force of *Poland* is naturally great, but Errors in Government have rendered it inconsiderable. The royal Revenue is very large, and very well paid; the prevailing Religion is that of the Church of *Rome*, but the *Greek* Church, the *Lutherans*, and indeed almost all Religions are tolerated in this Country. The present King is *Augustus III. Elector of Saxony*, born *Oct. 7, 1696*, elected King of *Poland Oct. 4, 1733*.

The Kingdoms of *Hungary* and *Bohemia*, formerly elective, but now hereditary in the House of *Austria*, with the lesser Principalities and other Territories, either dependent upon them, or belonging by other Rights to that august House, form one of the most considerable Sovereignities, as appears by the regular Forces in the Service of this Potentate, amounting to upwards of two hundred thousand Men. The People in the *Austrian* Dominions are mostly of the *Romish* Church; but
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On Laws and Government. 509

in *Hungary*, those of the *Greek Church* and the *Protestants* are the Majority. The Empress Queen and Grand Duchess of *Tuscany*, *Maria Theresa* of *Austria*, is Queen of *Hungary* and *Bohemia*, and was born *May 13, 1717*, and became the sole Heiress of the House of *Austria*, by the Death of her Father the late Emperor *Charles VI. Oct. 9, 1740*, and married the present Emperor *Feb. 12, 1736*.

We must next take notice of the new but potent Monarchy of *Prussia*, erected almost in our own Times, and yet for many Years very little considered after it was erected. One may safely say, that it is one of the most singular Kingdom that ever existed, since it is not very easy to learn where the Countries lie that belong in absolute Sovereignty to this Monarch. But notwithstanding this Inconveniency, another still greater, the want of Connection between his Territories; and a third greater than this, the having hardly a Port of Capacity or Consequence in his Dominions; yet the present King has undertaken to hold the Balance of the North, to give Direction to the Empire, and to be a Maritime Power. The two first he has in great measure accomplished, whether he will be able to bring about the last, and how, we must learn from Time, which alone is capable of revealing his Councils. This Monarch, who is the Wonder of this Age, and will be more so of the next, has many fine Countries, and the Expectancy of more; he has a large Revenue, and his constant standing Force consists of about one hundred thousand Horse, Foot, and Dragoons. His Subjects are *Lutherans*, and of the Reformed Religion; he likewise tolerates *Papists*, *Greeks*, and *Moravians*. His Name is *Frederick III.* born *January 24, 1712*, and came to the Crown by the Death of his Father, *June 1, 1740*.

We shall now pass through *Germany* over the *Rhine*, which brings us into the great Kingdom of *France*, the original Constitution of which very much resembled our own, their *Parliament* being properly our *Court de More*, and their *Assembly of the States* the same thing with our *Parliaments*. Their Kings had scarce so great Power as ours; and on the other hand, their Nobility down to the very last Century, were very near as formidable as our Barons. Cardinal *Rich-lieu* laid the Foundation of absolute Authority in the Monarchy, upon which the Cardinals his Successors have wrought assiduously ever since. By this means the two last *French Kings* have been as despotic as any of the Monarchs of the *East*, only they have been wise enough to save Appearances, that

That Tyranny might be tolerable. This Kingdom is one of the largest, as well as one of the finest in *Europe*; the Country fruitful, and producing all the Necessaries and Conveniencies of Life; notwithstanding which, the Gentry are necessitous, and the common People miserable. The King has a vast Revenue, and in time of Peace, his regular Troops are about one hundred and fifty thousand Men, which in time of War he doubles, and sometimes carries his Levies still higher, being able to force the last Man into the Field, and the last Penny out of the Pockets of the People. His Subjects are of the Popish Religion, no other being so much as tolerated in his Dominions. The present King is *Lewis XV.* surnamed the *Well-Beloved*, born *Feb. 15th, 1710*, and succeeded his Great Grandfather *Lewis XIV.* in the Throne *September 1, 1715.*

Great Britain ought next to employ our Pen; but as we have treated amply of that in the two last Chapters, it is not necessary to say any thing more here, than that our present Most Gracious Sovereign *GEORGE II.* whom God preserve! was born *October 30th, 1683*, and succeeded his Father *June 11th, 1727.*

The Kingdom of *Spain* was heretofore one of the greatest and most powerful in *Europe*, but by a Succession of weak Princes brought very low; and for fifty Years past, has been almost entirely governed either by *French* or *Italian* Councils. Its original Constitution, like the rest of the *Gothic* Governments, was in a great measure free, till in a long Course of Time it has been either corrupted or subverted; so that the *Cortes* or *Parliament* of *Spain* is grown into Disuse, and the King is become in a great measure absolute, though not to such a degree as his Brother of *France*. All the World knows the Dominions of this Crown are very extensive, and the Revenue no less considerable, but its Forces bear no Proportion to either; the Armies of *Spain* being mostly Mercenaries, and seldom numerous, or well paid. Its Naval Power, which was formerly so great, is dwindled almost to nothing, and except in Pride and Haughtiness, the modern *Spanish* Monarchs fall very far short of their Predecessors. The Popish Religion and the Inquisition reign here without Controul. The present King *Ferdinand VI.* was born *Sept. 23d, 1713*, and succeeded his Father *July 9th, 1746.*

Portugal is a Kingdom small in Extent, but considerable by its Trade and Plantations. A great part of the Country is fruitful

fruitful and pleasant, produces many valuable Commodities, and the People in general are much richer than their Neighbours the *Spaniards*. As to the Government, it is very moderate, and the Extent of the Regal Power scarce known, because it is seldom or never exerted. The Force of *Portugal* is very considerable both by Land and Sea, so that it owes its Security to Alliances, and chiefly to its strict Connection with *Great Britain*; yet considering the Size of his Dominions, the King of *Portugal* has as good a Revenue as any Prince in *Europe*. The Popish Religion and the Inquisition are predominant here also, though there are a great Number of concealed *Jews*, as there are in *Spain*. The present King of *Portugal* is *Joseph*, born *June* 6th, 1714, succeeded his Father in the Throne *July* 31st, 1750.

There are besides these, two new-erected Kingdoms. The first in virtue of the Treaty of *Utrecht*, by which *Victor Amadeus*, late Duke of *Savoy*, became King of *Sicily*, but was afterwards forced to exchange it for *Sardinia*. This Prince cannot boast of large Dominions, but the Situation of them makes him very considerable. He holds the Balance of Power in *Italy*, and must hold it as long as that Balance subsists. His Duchy of *Savoy* is but poor, yet populous, and serves to recruit his Forces. His Kingdom of *Sardinia* is a fertile Country, and yet far enough from being rich; but the Flower of his Territories, is his Principality of *Piedmont*, which is well cultivated, well built, and well peopled. His standing Troops consist of about forty thousand Men; and his Revenue enables him to keep a Court, if not the most splendid, the best regulated in *Europe*. It is but just to say of him, that he is a great Prince, and his Subjects happy. They are for the most part of the Popish Religion, excepting in the Vallies, where they are Protestants. The present King is *Charles Emanuel*, born *April* 27th, 1701, and became King by the Abdication of his Father *October* 3d, 1730.

The other new Kingdom is that of *Naples*, erected after the last War, by the Exchange of the Duchies of *Parma* and *Placentia* for the *Two Sicilies*. There cannot certainly be finer Countries than these, which are fruitful in the highest Degree, and have several fine Ports, yet they cannot boast either of extraordinary Riches or of extensive Trade. The King, however, with the Assistance of a Pension from *Spain*, maintains between twenty and thirty thousand Men, and a very few Gallies. His Revenue is very moderate; and upon the whole, he is very little more than a Viceroy, notwithstanding

standing his founding Titles of *Charles IX. of Bourbon, King of Naples, Sicily, and of Jerusalem, Infant of Spain.* He was born *Jan. 25, 1716,* and became King of the *Two Sicilies* in 1734. His Subjects are of the Popish Religion, and the Power of the Inquisition is felt here in its full Extent.

In former Times, the *Power* of the *Popes* was so great, that they not only claimed, but enjoyed a very large Share of Authority, even in Temporals, over all the Princes of *Christendom*; but tho' they still keep up their Claim, that Power is not only in a great measure curtailed, but the very Title to it treated with Contempt, even by Princes of their own Communion. The modern Popes are therefore grown wiser than to think of using their spiritual Arms, and have therefore had recourse to what serves their Purposes much better, political Intrigues and a constant Succession of Negotiations carried on amongst the foreign Ministers at *Rome*, where most of the great Projects that have been brought upon the Carpet of late Years, have either taken Birth, or been adjusted and brought into Order. The Mediation of the Pope also is frequently made use of to terminate the Wars, and to accommodate the Differences that happen between Princes of the *Romish* Religion. Besides all this, his Holiness enjoys a very considerable Principality in *Italy*; which, however, does no great Honour to that Policy for which the Court of *Rome* is renowned; since tho' in other Hands the Countries he possesses were as fair, as fruitful, and as flourishing as any in this Part of the World, yet for some Ages past, they have been in a miserable Condition, the Air being very unwholesome, from the standing Water and Bogs, owing to the Neglect of Cultivation, and the Want of People; for so far is his Yoke from being easy, or his Burthen light, that it is universally agreed, no People in *Europe* are more harshly treated than the Inhabitants of the Ecclesiastical State. The Forces of the Pope are so small and weak, that they serve only to oppress his own Subjects, and would scarce defend him from the weakest of his Neighbours; his Revenue however is very considerable, the Treasure at *Loretto* immense, and, there is believed to be a very large Sum of ready Money in the Cattle of *St. Angelo*. It is almost unnecessary to say of what Religion the People in this Country are; but it may not be amiss to observe, that the *Jews* are openly tolerated, and other Religions little molested, at the same time that the Inquisition of *Rome* is the most moderate of any. The present Pope is *Benedict XIV.* born *March 31st, 1675,* raised to the Pontifical Dignity *Aug. 17th, 1740.*

The

The eldest Republic in *Europe* is that of *Venice*, of the Erection of which the Reader has already had a competent Account in the Treatise upon Trade and Commerce. The supreme Power of the Republic, as well as the Administration, is invested in the Senate; and as this State is a pure *Aristocracy*; so there is a political Inquisition as well as an ecclesiastical one. The former is stiled the Council of Ten, and is much more severe than the latter; for Strangers may be of what Religion they please at *Venice*, provided they behave with Respect and Caution towards the Government. The Force of this State is very considerable, as they have always thirty or forty thousand regular Troops in their Pay; but their naval strength, which in past Times was very formidable, is at present but inconsiderable. The established Religion is that of the Church of *Rome*, but the *Greeks* and *Armenians* are also tolerated.

The Republic of *Genoa* comes next under our Consideration, and without doubt, the Narrowness of her Territories considered, never was any Place so subject as this to Revolutions. She has been often free, sometimes in Subjection, but almost always in Dependence. Her Territories are two narrow Stripes of Sea-Coast, lying East and West from the Capital, and stiled from thence the Eastern and Western *Riviera's*, which in *English* signifies Strands. The Døge is not for Life as at *Venice*, but is elected every two Years; the Administration is in him, with the little and great Council. The Island, or as they affect to call it, the Kingdom of *Corfica*, belongs to this Republic, and from hence they claim the same Honours that are paid to crown'd Heads; but have never yet been able to obtain them. Their Force is but small, and their Revenue neither great nor certain, which is the chief Reason of their depending upon the House of *Bourbon*. Their Subjects are of the *Romish* Religion.

The *Swiss Cantons* are, properly speaking, a Confederacy of Republics, that set themselves free in the Beginning of the fourteenth Century. They are in Number thirteen, each living under its own particular Government, and these Governments are as different as can be imagined; some are *Aristocracies*, some *Democracies*, but most of them mixed. The Cantons of *Zurich*, *Bern*, *Basil*, and *Schaffhausen* are Protestants; those of *Lucern*, *Fribourgh*, *Soleure*, *Zug*, *Uzi*, *Underwald*, and *Switz*, are Papists; the Cantons of *Glaris* and *Appenzel*, are partly Papists, partly *Calvinists*. The general Diet is held at *Baden*. The Leagues of the *Grisons* are also joined with the *Swiss*, as are also some other little States, particularly the Principality of *Neuchatel*, and the free City of *Geneva*. The Country is not very large, and most part of it mountainous.

tainous ; but there are some Places that are very pleasant. The People in general are rich, or, which I take to be the same thing, have competent Fortunes, and are content. The Force of the *Swiss Cantons*, the *Grisons*, and their Allies, is prodigiously great, so that they can bring into the Field two hundred thousand Men.

The Republic of the *United Provinces* is the last in point of Erection, but the most considerable in *Europe*. It consists also of a Confederacy, for each Province is a separate Republic : They are usually placed in the following Order, *viz. Holland, Zealand, Utrecht, Zutphen and Guelders, Overysse, Friesland, and Groningen*. The Government has been generally esteemed, but falsely, to be a *Democracy*; of late Years it has been thought a kind of *Oligarchy*. At present it is properly regulated, his Serene Highness the Prince of *Orange* is hereditary Stadtholder of the Union, and in Conjunction with the *States General*, hath the Administration of the Government ; in other respects the several Provinces remain independent. The Dominions of the Republic are not large, but the best Part of them is excellently cultivated, and the Province of *Holland* is, for its Extent, the most populous of any in *Europe*. The Trade of *Holland* is prodigiously great, and its Subjects immensely rich in time of Peace ; they have a regular Force of about fifty thousand Men, and are able to double, and even to treble it in time of War. The Religion established is *Calvinism*, but all other Religions are tolerated. The *States General*, as well as the Republic of *Venice*, enjoy the Honours of crowned Heads.

There are besides those before-mentioned, several lesser Principalities and States in *Europe*, which it will be sufficient to name. The Duchy of *Courland* depends upon the Kingdom of *Poland*. The Principality of *Transylvania* is united to the Kingdom of *Hungary*. The Waywodehips of *Moldavia* and *Walachia* depend upon the Grand Signior, as does also the little Republic of *Ragusa*. In *Italy* there are, the Grand Dukedom of *Tuscany*, the Dukedom of *Modena*, the Dukedom of *Massa Carrara*, and the Principality of *Monaco* ; to which we may add the small free States of *Lucca* and *St. Marino*. The following Table is calculated to shew the Proportion between the Powers of *Europe*, *Great Britain* being considered as the Standard, and consequently shews the Proportions of these Countries to each other.

The great Powers of *Europe*.

<i>Russia</i>	10	13	<i>Portugal</i>	0	36
<i>Germany</i>	3	53	<i>Spanish Netherlands</i>	0	18
<i>Sweden</i>	3	63	<i>United Provinces</i>	0	11
<i>Poland</i>	3	39	<i>Switzerland</i>	0	17
<i>France</i>	1	7	<i>Denmark</i>	1	49
<i>Spain</i>	1	81	<i>Italy</i>	1	19
<i>Turkey</i>	3	18			



PART XII.

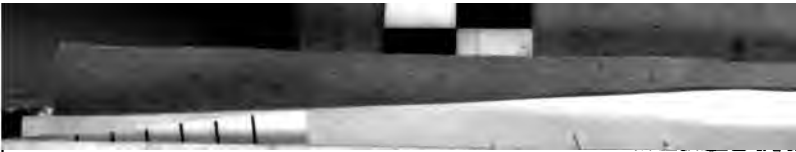
ON

HUMAN LIFE

AND

MANNERS.





(517)

ON
HUMAN LIFE
AND
MANNERS.

THUS, my dear Pupil, I have endeavoured to conduct you into the first Entrance, as it were, of the Temple of Science; and now, whether you will make any farther Progress into the sacred Recesses of this glorious Structure, depends entirely upon yourself. Here at least *my* Labours must leave you; and having sowed in your Mind every useful Seed, it is your Part to cultivate and improve them into the Fruits of Knowledge and Virtue: And if you have any Desire to be esteemed in the World by the Wise and the Good, if you have any Regard to your own future Happiness or Reputation, let me intreat you to exert your warmest Endeavours for that Purpose.

But before I dismiss you wholly from my Care, and resign you to the Commerce of Mankind, in which you are to make use of the Instructions which I have given you, I think it necessary to inform you, that without other Preparatives than I have been able to afford you, the World will be full of Dangers, and you will be ill qualified to encounter Temptations, to toil through Hardships, and emerge from Calamities. By those who have looked most attentively upon the Scenes of Life, it has been remarked, that Scholastic Knowledge is not of any great use in Complications of Difficulty, or under Pressures of Distress; that it yields no firm Protection from the Strokes of Misfortune, nor any certain Preservative against the Contagion of Vice. It often appears, that Men of Learning are the Tools of Policy, the Slaves of Power, and the Pimps of Wickedness; that they are corrupt, and promote Corruption; that they are Cowards and diffuse Cowardice; and that they comply with every Demand, because they tremble at every Danger. You will wonder, that having laid out my own

518 *On Human Life and Manners.*

Life in gaining and communicating Knowledge, I should at last make this Declaration ; and that after having so urgently pressed you to the Sciences, I should now give you this Character of those who profess them. But tho' these Faults are incident to Men of Learning, their Learning is not to be condemned ; they miscarried only because they were too soon satisfied with their Acquisitions ; and fell into Folly or into Crimes, not because they had gained Learning, but because they wanted Wisdom ; because they had never applied their Principles to their own Conduct, and had endeavoured to know any thing rather than themselves. They speculated so much, that they forgot to practise ; they observed others, but neglected themselves, and sent out so many Scouts for Intelligence, that there was no Force left to guard the Citadel ; and Fear or Avarice took Possession of their Hearts, while their Reason was engrossed by Enquiries of remote Effect or needless Curiosity. Let it therefore be always remembered by you in planning the Fabric of Happiness, that its Foundation must be laid by Wisdom ; and on any other Ground you will erect only a slight and tottering Structure, which will be sapped by the Mines of Vice, or overthrown by the Batteries of Affliction. Pause therefore for a time at the Portal of Life, and forbear to step forward, however the Prospect may allure you, till you have added to your other Acquirements that Wisdom, of which the Beginning is the Fear of God, and the Purpose and Effect eternal Felicity. You will then enter upon Life with the Courage and Dignity of a Being formed for endless Duration ; you will walk forward with your Eye fixed upon one Point ; and if Riches and Honours fall in your Way, you will use them with Ease and Superiority, as Means subservient to a greater Purpose. This Wisdom is not in the Power of one Man to confer upon another, because it is not like Learning, the mere Perception of Truth, which may by a proper Arrangement of Propositions and a just Application of Words, be forced upon the Mind ; but the Entertainment and Recollection of certain Truths, till they become familiar and predominant, so as to mix with every Meditation, preside in every Decision, and regulate our Conduct almost without any observable Intervention of our Reason : it is the Superaddition of a moral Sense, a voluntary Improvement of our Perceptions of Good and Evil, till we find their Difference instantaneously, almost in the same manner as we are affected by our other Senses, except that our other Motions are impressed by Nature, and these arise from ourselves.

Such a Sensation must be the Effect of Ideas, admitted with Pleasure and revolved by Choice ; it is the Result simply of each Man's own Endeavours, and the noblest Exertion of
Free

Free Will acting under the Direction of Reason. But in this, as in ever other complicated Design, there are some Precepts to be given, which, supposing the End already chosen, may facilitate its Attainment ; and therefore advise you to divide the Study of yourself into the three distinct Subdivisions of *Habits, Sentiments, and Passions.*

By *HABIT* is meant such a Custom of doing any particular Action, as to fall into it involuntarily and without thinking, or to repeat it so frequently as to render it almost a part of our Nature, not to be subdued without the greatest Difficulty. Of the *first* sort is the impious and foolish Habit of *Swearing* ; and of the *second* is that of *Drinking.* What can be the Motive to Swearing, it is not easy to say, or why any Man should depart from Reason as well as Virtue so far, as to mention with hourly Irreverence the sacred and awful Name of the Lord of Being, and subject himself to the Danger of habitual Perjury, of which tho' Part of the Guilt may be extenuated, as nobody is deceived, yet the other Part which arises from the Insult to the Author of Truth, no virtuous Being can conceive without Horror. The Original of this hateful Practice was perhaps only the Desire of appearing manly, and shewing that the Fear of Reproof is at an End ; and at last the Claim to Manhood is prosecuted, till the Practice is no longer the Consequence of Thought, and the Swearer is shunned as a Demon by the Pious, and as a Brute by the Polite.

The Motive to Drunkenness is easily discovered ; the Pleasures of Mirth, the Solicitations of Company, and the Calls of Appetite concur to promote it. But, my Pupil, learn early to despise that Mirth of which the End is Sorrow, to refuse that Company which calls you to Destruction, and to deny those Appetites, which are never to be satisfied, and which will demand more as they are more indulged. At least, before you suffer this Habit to prevail, take a deliberate View of the Consequences which must ensue it. An Unfitness and Inattention to Business, a Depravity of Taste and Manners, a Loss of Appetite, a Decay of Health, and perhaps a suddenly and untimely Period of your Days ; or a Condemnation to the sad Remainder of them in Pain and Misery, with a broken Constitution, a ruined Fortune, and a lost Reputation. A Course of Pain and Want unalleviated by Consciousness of Innocence, or Hope of Recompence.

I might go on to shew you in several other Instances, the fatal Consequences of indulging bad Habits ; but I will only mention that of *Idleness* and *Sauntering.* *Indolence*, says an Eastern Writer, is the Daughter of *Folly*, the Sister of *Vice*, and the

Mother of Misfortune. Whoever suffers himself to fall into this pernicious Habit, cannot hope to make much Progress in Learning or Knowledge of any Kind; and consequently must give up the glorious Aim of rendering himself useful and conspicuous in any Capacity or Station of Life. WISDOM is not to be won without great Assiduity and constant Application; She must be sought for early, and attended late. But he who consumes his Hours in idle Sauntering, or buries them in Morning Slumbers, shall never see the Light of Fame, any more than that of the Sun, rising upon him.

Let me then intreat you, my dear Pupil, to take particular Care how you contract *bad Habits* of any kind; like the envenom'd Shirt of *Hercules*, in spite of all your Endeavours to shake them off, they will hang upon you to your Destruction. But I will illustrate this Subject, and close my Advice to you on this Head, with a beautiful and instructive Fable, communicated to me by a Friend for this Purpose.

The Vision of THEODORE, the Hermit of Teneriffe, found in his Cell.

SON of Perseverance, whoever thou art, whose Curiosity has led thee hither, read and be wise. He that now calls upon thee is *Theodore* the Hermit of *Teneriffe*, who in the fifty-seventh Year of his Retreat left this Instruction to Mankind, lest his solitary Hours should be spent in vain.

I was once what thou art now, a Groveller on the Earth, and a Gazer at the Sky; I traffick'd and heaped Wealth together, I loved and was favoured, I wore the Robe of Honour, and heard the Music of Adulation; I was ambitious, and rose to Greatness; I was unhappy, and retired. I sought for some time what I at length found here, a Place where all real Wants might be easily supplied, and where I might not be under the Necessity of purchasing the Assistance of Men by the Toleration of their Follies. Here I saw Fruits and Herbs and Water, and here determined to wait the Hand of Death, which I hope, when at last it comes, will fall lightly upon me.

Forty-eight Years had I now passed in Forgetfulness in all mortal Cares, and without any Inclination to wander farther than the Necessity of procuring Sustenance required; but as I stood one Day beholding the Rock that overhangs my Cell, I found in myself a Desire to climb it; and when I was on its Top, was in the
same

On Human Life and Manners. 521

same manner determined to scale the next, till by Degrees I conceived a Wish to view the Summit of the Mountain, at the Foot of which I had so long resided. This Motion of my Thoughts I endeavoured to suppress, not because it appeared criminal, but because it was new; and all Change not evidently for the better, alarms a Mind taught by Experience to distrust itself. I was often afraid that my Heart was deceiving me, that my Impatience of Confinement rose from some earthly Passion, and that my Ardour to survey the Works of Nature, was only a hidden Longing to mingle once again in the Scenes of Life. I therefore endeavoured to settle my Thoughts into their former State, but found their Distraction every Day greater. I was always reproaching myself with the Want of Happiness within my Reach; and at last began to question whether it was not Laziness rather than Caution, that restrained me from climbing to the Summit of *Teneriffe*.

I rose therefore before the Day, and began my Journey up the Steep of the Mountain; but I had not advanced far, old as I was and burthened with Provisions, when the Day began to shine upon me; the Declivities grew more precipitous, and the Sand slid from beneath my Feet; at last, fainting with Labour, I arrived at a small Plain, almost inclosed by Rocks and open only to the East. I sat down to rest awhile, in full Persuasion that when I had recovered my Strength, I should proceed on my Design; but when once I had tasted Ease, I found many Reasons against disturbing it. The Branches spread a Shade over my Head, and the Gales of Spring wafted Odours to my Bosom.

As I sat thus forming alternately Excuses for Delay, and Resolutions to go forward, an irresistible Heaviness suddenly surprized me; I laid my Head upon the Bank and resigned myself to Sleep: when methought I heard the Sound as of the Flight of Eagles, and a Being of more than human Dignity stood before me. While I was deliberating how to address him, he took me by the Hand with an Air of Kindness, and asked me solemnly, but without Severity, ‘*Theodore*, whither art thou going?’ I am climbing, answered I, to the Top of the Mountain, to enjoy a more extensive Prospect of the Works of Nature. ‘Attend first (said he) to the Prospect which this Place affords, and what thou dost not understand I will explain. I am one of the benevolent Beings who watch over the Children of the Dust, to preserve them from those Evils which will not ultimately terminate in Good, and which they do not, by their own Faults, bring upon themselves,

‘ Look

‘ Look round therefore without Fear : observe, contemplate, and be instructed.’

Encouraged by this Assurance, I looked and beheld a Mountain higher than *Teneriffe*, to the Summit of which the Human Eye could never reach ; when I had tired myself with gazing upon its Height, I turned my Eyes towards its Foot, which I could easily discover, but was amazed to find it without Foundation, and placed inconceivably in Emptiness and Darkness. Thus I stood terrified and confused ; above were Tracts inscrutable, and below was total Vacuity. But my Protector, with a Voice of Admonition, cried out, *Theodore*, be not affrighted, but raise thy Eyes again ; the *Mountain of Existence* is before thee, survey it and be wise.

I then looked with more deliberate Attention, and observed the Bottom of the Mountain to be of gentle Rise, and overspread with Flowers ; the Middle to be more steep, embarrassed with Craggs, and interrupted by Precipices, over which hung Branches loaded with Fruits, and among which were scattered Palaces and Bowers. The Tracts which my Eye could reach nearest the Top were generally barren ; but there were among the Clefts of the Rocks, a few hardy Evergreens, which though they did not give much Pleasure to the Sight or Smell, yet seemed to cheer the Labour and facilitate the Steps of those who were clambering among them.

Then beginning to examine more minutely the different Parts, I observed, at a great Distance, a multitude of both Sexes issuing into View from the Bottom of the Mountain. Their first Actions I could not accurately discern ; but as they every Moment approached nearer, I found that they amused themselves with gathering Flowers under the Superintendence of a modest Virgin in a white Robe, who seemed not over-solicitous to confine them to any settled Pace, or certain Track ; for she knew that the whole Ground was smooth and solid, and that they could not easily be hurt or bewildered. When, as it often happened, they plucked a Thistle for a Flower, *Innocence*, so was she called, would smile at the Mistake. Happy, said I, are they who are under so gentle a Government, and yet are safe. But I had no Opportunity to dwell long on the Consideration of their Felicity ; for I found that *Innocence* continued her Attendance but a little Way, and seemed to consider only the flowery Bottom of the Mountain as her proper Province. Those whom she abandoned scarcely knew that they were left, before they perceived themselves in the Hands of *Education*, a Nymph more severe in her Aspect and imperious in her

her Commands, who confined them to certain Paths, in their Opinion, too narrow and too rough. These they were continually solicited to leave by *Appetite*, whom *Education* could never fright away, though she sometimes awed her to such Timidity, that the Effects of her Presence were scarcely perceptible. Some went back to the first Part of the Mountain, and seemed desirous of continuing busied in plucking Flowers, but were no longer guarded by *Innocence*; and such as *Education* could not force back, proceeded up the Mountain by some miry Road, in which they were seldom seen, and scarcely ever regarded.

As *Education* led her Troop up the Mountain, nothing was more observable than that she was frequently giving them Cautions to beware of *Habits*; and was calling out to one or another at every Step, that a *Habit* was ensnaring them; that they would be under the Dominion of *Habit* before they perceived their Danger; and that those whom a *Habit* should once subdue, had little hope of regaining their Liberty.

Of this Caution, so frequently repeated, I was very solicitous to know the Reason, when my Protector directed my Regard to a Troop of Pygmies, which appeared to walk silently before those that were climbing the Mountain, and each to smooth the Way before her Follower. I found that I had missed the Notice of them before, both because they were so minute as not easily to be discerned, and because they grew every Moment nearer in their Colour to the Objects with which they were surrounded. As the Followers of *Education* did not appear to be sensible of the Presence of these dangerous Associates, or, ridiculing their diminutive Size, did not think it possible that human Beings should ever be brought into Subjection by such feeble Enemies, they generally heard her Precepts of Vigilance with Wonder; and, when they thought her Eye withdrawn, treated them with Contempt. Nor could I myself think her Cautions so necessary as her frequent Inculcation seemed to suppose, till I observed that each of these petty Beings held secretly a Chain in her Hand, with which she prepared to bind those whom she found within her Power. Yet these *Habits* under the Eye of *Education* went quietly forward, and seemed very little to increase in Bulk or Strength; for though they were always willing to join with *Appetite*, yet when *Education* kept them apart from her, they would very punctually obey Command, and make the narrow Roads in which they were confined easier and smoother.

It was observable, that their Stature was never at a stand, but continually growing or decreasing, yet not always in the same

Proportions ; nor could I forbear to express my Admiration, when I saw in how much less time they generally gained than lost Bulk. Though they grew slowly in the Road of *Education*, it might however be perceived that they grew ; but if they once deviated at the Call of *Appetite*, their Stature soon became gigantic, and their Strength was such, that *Education* pointed out to her Tribe many that were led in Chains by them, whom she could never more rescue from their Slavery. She pointed them out, but with little Effect ; for all her Pupils appeared confident of their own Superiority to the strongest *Habit*, and some seemed in secret to regret that they were hindered from following the Triumph of *Appetite*.

It was the peculiar Artifice of *Habit* not to suffer her Power to be felt at first. Those whom she led, she had the Address of appearing only to attend, but was continually doubling her Chains upon her Companions, which were so slender in themselves and so silently fastened, that while the Attention was engaged by other Objects, they were not easily perceived. Each Link grew tighter as it had been longer worn, and when by continual Additions they became so heavy as to be felt, they were very frequently too strong to be broken.

When *Education* had proceeded in this manner to the Part of the Mountain where the Declivity began to grow craggy, she resigned her Charge to two Powers of superior Aspect. The meaner of them appeared capable of presiding in Senates or governing Nations, and yet watched the Steps of the other with the most anxious Attention, and was visibly confounded and perplexed if ever she suffered her Regard to be drawn away. The other seemed to approve her Submission as pleasing, but with such a Condescension as plainly shewed that she claimed it as due ; and indeed so great was her Dignity and Sweetness, that he who would not reverence, must not behold her.

"*Theodore*," said my Protector, "be fearless, and be wise ; approach these Powers, whose Dominion extends to all the remaining Part of the *Mountain of Existence*." I trembled, and ventured to address the inferior Nymph, whose Eyes, though piercing and awful, I was not able to sustain. "Bright Power, said I, by whatever Name it is lawful to address thee, tell me, thou who presidest here, on what Condition thy Protection will be granted." "It will be granted ! said she ; only to Obedience. I am *Reason*, of all subordinate Beings the noblest and the greatest ; who, if thou wilt receive my Laws, will reward thee like the rest of my Votaries, by conducting thee to *Religion*." Charmed by her Voice and Aspect, I professed my Readiness to follow her. She then pre-

vented

sent me to her *Mistress*, who looked upon me with Tenderness. I bowed before her, and she smiled.

When *Education* delivered up those for whose Happiness she had been so long solicitous, she seemed to expect that they should express some Gratitude for her Care, or some Regret at the Loss of that Protection which she had hitherto afforded them. But it was easy to discover, by the Alacrity which broke out at her Departure, that her Presence had been long displeasing, and that she had been teaching those who felt in themselves no want of Instruction. They all agreed in rejoicing that they would no longer be subject to her Caprices, or disturbed by her Documents, but should be now under the Direction only of *Reason*, to whom they made no doubt of being able to recommend themselves by a steady Adherence to all her Precepts. *Reason* counselled them at their first Entrance upon her Province, to insert themselves among the Votaries of *Religion*; and informed them, that if they trusted to her alone, they would find the same Fate with her other Admirers, whom she had not been able to secure against *Appetites* and *Passions*, and who having been seized by *Habits* in the Regions of *Desire*, had been dragged away to the Caverns of *Despair*. Her Admonition was vain, the greater Number declared against any other Direction, and doubted not but by her Superintendency they should climb with Safety up the *Mountain of Existence*. "My Power, said *Reason*, is to advise, not to compel; I have already told you the Danger of your Choice. The Path seems now plain and even, but there are Asperities and Pitfalls, over which *Religion* only can conduct you. Look upwards, and you perceive a Mist before you settled upon the highest visible Part of the Mountain, a Mist by which my Prospect is terminated, and which is pierced only by the Eyes of *Religion*. Beyond it are the Temples of *Happiness*, in which those who climb the Precipice by her Direction, after the Toil of their Pilgrimage repose for ever. I know not the Way, and therefore can only conduct you to a better Guide. *Pride* has sometimes reproached me with the Narrowness of my View, but when she endeavoured to extend it, could only shew me, below the Mist, the Bowers of *Content*; even they vanished as I fixed my Eyes upon them; and those whom she persuaded to travel towards them were enchanted by *Habits*, and ingulfed by *Despair*, a cruel Tyrant, whose Caverns are beyond the Darkness on the right Side and on the left, from whose Prisons none can escape, and whom I cannot teach you to avoid."

Such

526 *On Human Life and Manners.*

Such was the Declaration of *Reason* to those who demanded her Protection. Some that recollected the Dictates of *Education*, finding them now seconded by another Authority, submitted with Reluctance to the strict Decree, and engaged themselves among the Followers of *Religion*, who were distinguished by the Uniformity of their March, though many of them were Women, and by their continual Endeavours to move upwards, without appearing to regard the Prospects which at every Step courted their Attention.

All those who determined to follow either *Reason* or *Religion*, were continually importuned to forsake the Road, sometimes by *Passions*, and sometimes by *Appetites*, of whom both had reason to boast the Success of their Artifices; for so many were drawn into By-paths, that any way was more populous than the right. The Attacks of the *Appetites* were more impetuous, those of the *Passions* longer continued. The *Appetites* turned their Followers directly from the true Way, but the *Passions* marched at first in a Path nearly in the same Direction with that of *Reason* and *Religion*; but deviated by slow Degrees, till at last they entirely changed their Course. *Appetite* drew aside the Dull, and *Passion* the Sprightly. Of the *Appetites*, *Lust* was the strongest; and of the *Passions*, *Vanity*. The most powerful Assault was to be feared, when a *Passion* and an *Appetite* joined their Enticements; and the Path of *Reason* was best followed, when a *Passion* called to one Side, and an *Appetite* to the other.

These Seducers had the greatest Success upon the Followers of *Reason*, over whom they scarcely ever failed to prevail, except when they counteracted one another. They had not the same Triumphs over the Votaries of *Religion*; for tho' they were often led aside for a time, *Religion* commonly recalled them by her Emissary *Conscience*, before *Habit* had time to enchain them. But they that professed to obey *Reason*, if once they forsook her, seldom returned; for she had no Messenger to summon them but *Pride*, who generally betrayed her Confidence, and employed all her Skill to support *Passion*; and if ever she did her Duty, was found unable to prevail, if *Habit* had interposed.

I soon found that the great Danger to the Followers of *Religion* was only from *Habit*; every other Power was easily resisted, nor did they find any Difficulty when they inadvertently quitted her, to find her again by the Direction of *Conscience*; unless they had given time to *Habit* to draw her Chain behind them, and bar up the Way by which they had wandered.

Of some of those the Condition was justly to be pitied, who turned at every Call of *Conscience*, and tried, but without Effect, to burst the Chains of *Habit*: saw Religion walking forward at a Distance, saw her with Reverence, and longed to join her; but were, whenever they approached her, withheld by *Habit*, and languished in sordid Bondage, which they could not escape, tho' they scorned and hated it.

It was evident that the *Habits* were so far from growing weaker by these repeated Contests, that if they were not totally overcome, every Struggle enlarged their Bulk and increased their Strength; and a *Habit* opposed and victorious was more than twice as strong as before the Contest. The manner in which those who were weary of their Tyranny endeavoured to escape from them, appeared by the Event to be generally wrong; they tried to loose their Chains one by one, and to retreat by the same Degrees as they advanced; but before the Deliverance was completed, *Habit* always threw new Chains upon her Fugitive: nor did any escape her but those who by an Effort sudden and violent, burst their Shackles at once, and left her at a Distance; and even of these many rushing too precipitately forward, and hindered by their Terrors from stopping where they were safe, were fatigued with their own Vehemence, and resigned themselves again to that Power from whom an Escape must be so dearly bought, and whose Tyranny was little felt, except when it was resisted.

Some however there always were, who, when they found *Habit* prevailing over them, called upon *Reason* or *Religion* for Assistance; each of them willingly came to the Succour of her Suppliant; but neither with the same Strength, nor the same Success. *Habit*, insolent with her Power, would often presume to parley with *Reason*, and offer to loose some of her Chains if the rest might remain. To this *Reason*, who was never certain of Victory, frequently consented, but always found her Concession destructive, and saw the Captive led away by *Habit* to his former Slavery. *Religion* never submitted to Treaty, but held out her Hand with Certainty of Conquest; and if the Captive to whom she gave it did not quit his Hold, always led him away in Triumph, and placed him in the direct Path to the Temple of *Happiness*, where *Reason* never failed to congratulate his Deliverance, and encourage his Adherence to that Power to whose timely Succour he was indebted for it.

When

When the Traveller was again placed in the Road of *Happiness*, I saw *Habit* again gliding before him, but reduced to the Stature of a Dwarf, without Strength and without Activity; but when the *Passions* or *Appetites* which had before seduced him, made their Approach, *Habit* would on a sudden start into Size, and with unexpected Violence push him towards them. The Wretch thus impelled on one Side, and allured on the other, too frequently quitted the Road of *Happiness*, to which, after his second Deviation from it, he rarely returned. But if by a timely Call upon *Religion*, the Force of *Habit* was eluded, her Attacks grew fainter, and at last her Correspondence with the Enemy was entirely destroyed. She then began to employ those restless Faculties in compliance with the Power which she could not overcome; and as she grew again in Stature and in Strength, cleared away the Asperities of the Road to *Happiness*.

From this Road I could not easily withdraw my Attention, because all who travelled it appeared chearful and satisfied; and the farther they proceeded, the greater appeared their Alacrity, and the stronger their Conviction of the Wisdom of their Guide. Some who had never deviated but by short Excursions, had *Habit* in the Middle of their Passage, vigorously supporting them and driving off their *Appetites* and *Passions*, which attempted to interrupt their Progress. Others, who had entered this Road late, or had long forsaken it, were toiling on without her Help at least, and commonly against her Endeavours. But I observed, when they approached to the barren Top, that few were able to proceed without some Support from *Habit*, and that those whose *Habits* were strong advanced towards the Mists with little Emotion, and entered them at last with Calmness and Confidence; after which they were seen only by the Eye of *Religion*, and though *Reason* looked after them with the most earnest Curiosity, she could only obtain a faint Glimpse, when her Mistress, to enlarge her Prospect, raised her from the Ground. *Reason*, however, discerned that they were safe, but *Religion* saw that they were happy.

‘ Now, *Theodore*, said my Protector, withdraw thy View
 ‘ from the Regions of Obscurity, and see the Fate of those who,
 ‘ when they were dismissed by *Education*, would admit no
 ‘ Direction but that of *Reason*. Survey their Wanderings,
 ‘ and be wise.’

I looked then upon the Road of *Reason*, which was indeed, so far as it reached, the same with that of *Religion*, nor had *Reason* discovered it but by her Instruction. Yet when she had
 once

once been taught it, she clearly saw that it was right ; and *Pride* had sometimes incited her to declare that she discovered it herself, and persuaded her to offer herself as a Guide to *Religion*, whom after many vain Experiments she found it her highest Privilege to follow. *Reason* was however at last well instructed in part of the Way, and appeared to teach it with some Success, when her Precepts were not misrepresented by *Passion*, or her Influence overborn by *Appetite*. But neither of these Enemies was she able to resist. When *Passion* seized upon her Votaries, she seldom attempted Opposition, she seemed indeed to contend with more Vigour against *Appetite*, but was generally overwheeled in the Contest ; and if either of her Opponents had confederated with *Habit*, her Authority was wholly at an End. When *Habit* endeavoured to captivate the Votaries of *Religion*, she grew by slow degrees, and gave time to escape ; but in seizing the unhappy Followers of *Reason*, she proceeded as one that had nothing to fear, and enlarged her Size, and doubled her Chains without Intermission, and without Reserve.

Of those who forsook the Directions of *Reason*, some were led aside by the Whispers of *Ambition*, who was perpetually pointing to stately Palaces, situated on Eminences on either Side, recounting the Delights of Affluence, and boasting the Security of Power. They were easily persuaded to follow her, and *Habit* quickly threw her Chains upon them ; they were soon convinced of the Folly of their Choice, but few of them attempted to return. *Ambition* led them forward from Precipice to Precipice, where many fell and were seen no more. Those that escaped, were, after a long Series of Hazards, generally delivered over to *Avarice*, and enlisted by her in the Service of *Tyranny*, where they continued to heap up Gold till their Patrons or their Heirs pushed them headlong at last into theaverns of *Despair*.

Others were inticed by *Intemperance* to ramble in search of those Fruits that hung over the Rocks, and filled the Air with their Fragrance. I observed, that the *Habits* which hovered about these soon grew to an enormous Size, nor were there any who less attempted to return to *Reason*, or sooner sunk into the Gulphs that lay before them. When these first quitted the Road, *Reason* looked after them with a Frown of Contempt, but had little Expectations of being able to reclaim them ; for the Bowl of Intoxication was of such Qualities, as to make them lose all Regard but for the present Moment ; neither *Hope* nor *Fear* could enter their Retreats, and *Habit* had so absolute a Power, that even *Conscience*, if *Religion* had employed her in

their Favour, would not have been able to force an Entrance.

There were others whose Crime it was rather to neglect *Reason* than to disobey her, and who retreated from the Heat and Tumult of the Way, not to the Bowers of *Intemperance*, but to the Maze of *Indolence*. They had this Peculiarity in their Condition, that they were always in sight of the Road of *Reason*, always wishing for her Presence, and always resolving to return to-morrow. In these was most eminently conspicuous the Subtlety of *Habit*, who hung imperceptible Shackles upon them, and was every Moment leading them farther from the Road, which they always imagined that they had the Power of reaching. They wandering on from one Double of the Labyrinth to another with the Chains of *Habit* hanging secretly upon them, till as they advanced, the Flowers grew paler, and the Scents fainter: they proceeded in their dreary March without Pleasure in their Progress, yet without Power to return; and had this Aggravation above all others, that they were criminal but not delighted. The Drunkard for a time laughed over his Wine; the ambitious Man triumphed in the Misfortune of his Rival; but the Captives of *Indolence* had neither Superiority nor Merriment. *Discontent* lowred in their Looks, and *Sadness* hovered round their Shades; yet they crawled on reluctant and gloomy, till they arrived at the Depth of the Recess, varied only with Poppies and Nightshade, where the Dominion of *Indolence* terminates, and the hopeless Wanderer is delivered up to *Melancholy*: the Chains of *Habit* are riveted for ever, and *Melancholy* having tortured her Prisoner for a time, consigns him at last to the Cruelty of *Despair*.

While I was musing on this miserable Scene, my Protector called out to me, 'Remember, *Theodore*, and be wise, and let not HABIT prevail against thee.' I started, and beheld myself surrounded by the Rocks of *Teneriffe*; the Birds of Light were singing in the Trees, and the Glances of the Morning darted upon me.



Let us now turn our Thoughts to the Passions, of which I will not puzzle or embarrass you with a metaphysical Account, nor endeavour to discover how they are formed in the Mind, or from what Causes or Combinations they proceed: but shall consider a few of the most useful or dangerous of them, as they commonly appear in Human Nature; and give you some Rules for their good Regulation.

I will

1. I will begin first with *Admiration* or *Wonder*, as it is undoubtedly the first Passion that is exercised in us. The use of it is to fix our Attention on the Things about us, whether Natural or Artificial, and to make us consider and reflect upon them; by which Means we not only come the sooner to a Knowledge of their Qualities and Uses, but they are at the same time so strongly impressed upon our Memories, that they are always ready for our Use and Application during the whole Course of our future Lives. In early Youth, almost every Object around us excites our *Admiration*; and if we continue to make Researches in the Works of God, we shall always find something new, wise, great, or some way or other sufficient to raise this agreeable Sensation even to our latest Period. However, there is a foolish Gaze and Wonder at every thing, which is very ridiculous, and ought early to be cured; there is indeed a Time at which it cannot be really avoided, though its Appearance may sometimes be repressed. Our Wonder will for ever be in proportion to our Ignorance, and therefore the only Cure is a large Acquaintance with the Works of Nature and Art, and with the most remarkable Occurrences of Human Life, and the Affairs of Mankind: Things will not then so frequently appear uncommon or surprising, as when our Knowledge was narrow and more confined.

2. The next Passion I shall speak of is *Fear*; as this also is very often, by the Weakness and Foolishness of Mothers and Nurses, raised in our Minds before we have any true Notions of Things. The Use of this Passion is to quicken our Apprehensions of the Dangers or Evils that threaten us, of whatsoever Kind or Nature, and to excite our Endeavours to avoid them. In this Sense it is so useful a Passion, that it may be called the Shelter of Life; and is what every prudent Man should make use of on all proper Occasions. Who would not avoid a Precipice? run from a Lion? or, submit to a Band of armed Russians? But when it so takes Possession of our Hearts and Spirits, as to render us cowardly and pusillanimous, incapable of boldly standing up against Vice and Injustice, or resolutely supporting the Calamities of Life; it then betrays the End of its Institution, and subjects us to those very Evils and Dangers, against which it was intended to guard us. We are assailed also by another set of Fears, which, if indulged, will render us extremely unhappy. These are the Fear of Spirits, Poverty, Pain or Death. The surest, and indeed the only Means to preserve one's self from Terrors of this Kind, is to keep a Conscience free from Self-reproach,

532 *On Human Life and Manners.*

and a Mind perfectly submitted to all the Dispensations of Providence. It is this alone can inspire true and rational Courage; and a Breast thus fortified with manly Virtue, has nothing to fear from the Malice of any Power, whether visible or invisible; as he will look with a noble Contempt on Poverty, Pain, or Death, whenever the Author of his Nature, or the Integrity of his Heart shall call upon him to submit to them. But it is above all to be remembered, that as Fear is not to be totally eradicated, because it has good Uses, its Use is only good when it is proportioned to the Objects that excite it; the Girl that fears an Insect as if a Lion, is not more contemptible, than he that fears a Lion no more than an Insect; their Judgment is equally false, and the Fool-hardy even of greater Danger. How much then is he to be despised, who, in the Style of *Cervantes*, fears a Lizard more than Omnipotence, whose least Solitude is to please his Maker?

3. Another very pernicious Passion is *Pride*, which yet was planted by Heaven in our Nature, to raise our Emulation to imitate great and worthy Characters or Actions, to excite in us a Zeal for what is right and just, and a laudable Indignation against Oppressors and Workers of any kind of Iniquity; in short, to make us set a proper Value on ourselves, and despise a worthless Fellow, however exalted. Thus far *Pride* is a Virtue, and may justly be called a Greatness of Soul. But *Pride*, like other Passions, generally fixes upon wrong Objects, or is applied in wrong Proportions. How common is it to see a Wretch whom every Vice has rendered miserable, and every Folly contemptible, valuing himself on his high Birth, and boasting those illustrious Ancestors, of whom he inherits nothing but the Name or Title! Ancestors, who if they knew him, would disown their Dependent with Contempt, and those who are to be his Successors, if they avoid his Vices, will erase his Name from that Pedigree which he boasts. How oft is Wealth the Source of Pride and Haughtiness? Yet, can it possibly give to its Possessor either Wisdom, or Virtue, or Honour? Some pride themselves in the acquired, and some in the natural Qualities of their Minds; such as Learning, Wit, Memory, &c. But all Pride of this Sort is Folly; avoid it therefore, as you would the Imputation of want of Sense. But nothing is more common than for Men to found their Pride of Knowledge upon the Ignorance of how little is really known. If they saw the Extent of Science, they would know that what they have acquired is nothing to that which remains; and that they are only considered as learned, because they have yet only found Admission amongst the Ignorant. Virtue
and

and useful Knowledge are the only genuine Distinctions which can render one Man superior to another ; and take it for a Rule, the more any one possesses of those two glorious Qualities, the less he will be capable of looking down with Insolence and Contempt on others.

4. How mischievous, and how destructive to our Peace is the Passion of Anger ! Yet how necessary is it that a proper Portion of it should on some Occasions animate the Heart and raise the Spirit of Man ! There is a certain manly Reluctance which ought to rise in the Breast of every one against Oppression and Injustice. But this is not to break out either in the cruel and impious Methods of bloody Revenge, and what is most falsely called *Honourable Satisfaction*, or in the base Means of secret Malice ; but in an open and honest Indignation against the Wrong-doer. On the other hand, if you suffer yourself to be transported with Passion on every trifling Occasion, such as little Rudenesses, the Mistakes of Servants, or the slightest Contradictions of your Friends and Acquaintance, your whole Life will be a continued Scene of Uneasiness and Vexation ; you will become tyrannical to your Dependents, offensive to your Superiors, and hated of those who are exposed to your Follies, and the Derision of those who are above your Reach. Consider, there are but few Things, very few, that are worth a wise Man's Anger ; and even in those few, if he is a prudent or good-natured Man, he will temper his Passion with Reason.

The next Passion I shall recommend to your most cautious Regulation is *Love* : A Passion of all others the most apt to be improperly cherished in the Heart of Youth. Remember therefore to guard against its first Impressions, with the highest Attention. What Follies, what Excesses, what Madneses do young Men commit for the Sake of indulging this Passion ! What Pain, what Misery, what Remorse and Shame, perpetually follow the loose and licentious Gratifications of it ! Endeavour therefore (I repeat it again) to the utmost of your Power, to check and govern it by the Restraints of Prudence and Virtue : If not, you must for ever bid adieu to Health, to Fortune, and to Happiness.

I might proceed to some of the other Passions, but these I think are the Principal ; and as I clos'd the last Part with a modern Allegory, so I chuse to finish and illustrate this with one of the most beautiful Fables in all Antiquity.



The CHOICE of *Hercules*.

I.

NOW had the Son of *Jove* mature, attain'd
 The joyful Prime: when Youth elate and gay,
 Steps into Life; and follows unrestrain'd
 Where Passion leads, or Prudence points the Way.
 In the pure Mind, at those ambiguous Years,
 Or Vice, rank Weed, first strikes her pois'nous Root;
 Or haply Virtue's op'ning Bud appears
 By just Degrees; fair Bloom of fairest Fruit:
 For, if on Youth's untainted Thought impress'd,
 The gen'rous Purpose still shall warm the manly Breast.

II.

As on a Day, reflecting on his Age
 For highest Deeds now ripe, Alcides sought
 Retirement; Nurse of Contemplation sage;
 Step following Step, and Thought succeeding Thought:
 Musing, with steady Pace the Youth pursu'd
 His Walk; and lost in Meditation stray'd
 Far in a lonely Vale, with Solitude
 Converling; while intent his Mind survey'd

The

On Human Life and Manners. 535

ious Path of Life : before him lay
e's rough Ascent, there Pleasure's flow'ry Way.

III.

Much did the View divide his wav'ring Mind :
Now glow'd his Breast with generous Thirst of Fame ;
Now Love of Ease to softer Thoughts inclin'd
His yielding Soul, and quench'd the rising Flame.
When, lo ! far off two Female Forms he spies ;
Direct to him their Steps they seem to bear :
Both large and tall, exceeding human Size ;
Both, far exceeding human Beauty, fair.
Graceful, yet each with different Grace, they move :
This, striking sacred Awe ; that, softer, winning Love.

IV.

The first, in native Dignity surpass'd ;
Artless and unadorn'd she pleas'd the more :
Health, o'er her Looks a genuine Lustre cast :
A Vest, more white than new-fall'n Snow she wore.
August she trod, yet modest was her Air ;
Serene her Eye, yet darting heav'nly Fire.
Still she drew near ; and nearer still more fair,
More mild appear'd : yet such as might inspire
Pleasure corrected with an awful Fear ;
Majestically sweet, and amiably severe.

V.

The other Dame seem'd ev'n of fairer Hue ;
But bold her Mien ; unguarded rov'd her Eye :
And her flush'd Cheeks confess'd at nearer View
The borrow'd Blushes of an artful Dye.
All soft and delicate, with airy Swim
Lightly she danc'd along ; her Robe betray'd

536 *On Human Life and Manners.*

Thro' the clear Texture every tender Limb,
 Height'ning the Charms it only seem'd to shade :
 And as it flow'd adown, so loose and thin,
 Her Stature shew'd more tall ; more snowy-white her Skin.

VI.

Oft with a Smile she view'd herself askance ;
 Ev'n on her Shade a conscious Look she threw :
 Then all around her cast a careless Glance,
 To mark what gazing Eyes her Beauty drew.
 As they came near, before that other Maid
 Approaching decent, eagerly she press'd
 With hasty Step : nor of Repulse afraid,
 With Freedom bland the wond'ring Youth address'd :
 With winning Fondness on his Neck she hung ;
 Sweet as the Honey-dew flow'd her enchanting Tongue.

VII.

“ Dear *Hercules*, whence this unkind Delay ?
 “ Dear Youth, what Doubts can thus distract thy Mind ?
 “ Securely follow where I lead the Way ;
 “ And range thro' Wilds of Pleasure unconfin'd.
 “ With me retire, from Noise, and Pain, and Care ;
 “ Embath'd in Bliss, and wrapt in endless Ease :
 “ Rough is the Road to Fame, thro' Blood and War ;
 “ Smooth is my Way, and all my Paths are Peace.
 “ With me retire, from Toils and Perils free ;
 “ Leave Honour to the Wretch ! Pleasures were made for thee.

VIII.

“ Then will I grant thee all thy Soul's Desire ;
 “ All that may charm thine Ear, and please thy Sight :
 “ All that thy Thought can frame, or Wish require,
 “ To steep thy ravish'd Senses in Delight.
 “ The



On Human Life and Manners. 537

- “ The sumptuous Feast, enhanc’d with Music’s Sound ;
“ Fittest to tune the melting Soul to Love :
“ Rich Odours, breathing choicest Sweets around ;
“ The fragrant Bow’r, cool Fountain, shady Grove :
“ Fresh Flowers, to strew thy Couch, and crown thy Head ;
“ Joy shall attend thy Steps, and Ease shall smooth thy Bed.

IX.

- “ These will I freely, constantly supply ;
“ Pleasures, nor earn’d with Toil, nor mix’d with Woe :
“ Far from thy Rest repining Want shall fly ;
“ Nor Labour bathe in Sweat thy careful Brow.
“ Mature the copious Harvest shall be thine ;
“ Let the laborious Hind subdue the Soil :
“ Let the rash Soldier Spoils of War to win ;
“ Won by the Soldier thou shalt share the Spoil :
“ These softer Cares my blest Allies employ,
“ New Pleasures to invent ; to wish, and to enjoy.”

X.

- Her winning Voice the Youth attentive caught :
He gaz’d impatient on the smiling Maid ;
Still gaz’d, and listen’d : then her Name besought.
“ My Name, fair Youth, is Happiness, she said :
“ Well can my Friends this envy’d Truth maintain :
“ They share my Bliss ; they best can speak my Praise :
“ Tho’ Slander call me *Sloth*—Detraction vain !
“ Heed not what Slander, vain Detractor, says :
“ Slander, still prompt true Merit to defame ;
“ To blot the brightest Worth, and blast the fairest Name.”

XI.

- By this, arriv’d the fair majestic Maid :
(She all the while, with the same modest Face,

Com-

538 *On Human Life and Manners.*

Compos'd advanc'd.) "Know, *Hercules*," she said
 With manly Tone, "thy Birth of heav'nly Race;
 "Thy tender Age that lov'd Instruction's Voice,
 "Promis'd thee generous, patient, brave, and wise;
 "When Manhood should confirm thy glorious Choice:
 "Now Expectation waits to see thee rise.
 "Rise, Youth! exalt thyself, and me: approve
 "Thy high Descent from Heav'n; and dare be worthy *Jove*."

XII.

"But what Truth prompts, my Tongue shall not disguise;
 "The steep Ascent must be with Toil subdu'd:
 "Watchings and Cares must win the lofty Prize
 "Propos'd by Heav'n; true Bliss, and real Good.
 "Honour rewards the Brave and Bold alone;
 "She spurns the Timorous, Indolent, and Base:
 "Danger and Toil stand stern before her Throne;
 "And guard (so *Jove* commands) the sacred Place.
 "Who seeks her must the mighty Cost sustain,
 "And pay the Price of Fame; Labour, and Care, and Pain."

XIII.

"Wou'dst thou engage the Gods peculiar Care?
 "O *Hercules*, th' immortal Powers adore!
 "With a pure Heart, with Sacrifice and Pray'r
 "Attend their Altars; and their Aid implore.
 "Or wou'dst thou gain thy Country's loud Applause,
 "Lov'd as her Father, as her God ador'd?
 "Be thou the bold Assertor of her Cause;
 "Her Voice, in Council; in the Fight, her Sword.
 "In Peace, in War, pursue thy Country's Good:
 "For her, bare thy bold Breast; and pour thy generous Blood."

XIV.



XIV.

“ Woud’st thou, to quell the Proud and lift th’ Opprest,
“ In Arts of War and matchless Strength excel?
“ First conquer thou thyself. To Ease, to Rest,
“ To each soft Thought of Pleasure, bid farewell.
“ The Night alternate, due to sweet Repose,
“ In Watches waste; in painful March, the Day:
“ Congeal’d, amidst the rigorous Winter’s Snows;
“ Scorch’d by the Summer’s thirst-inflaming Ray,
“ Thy harden’d Limbs shall boast superior Might:
“ Vigour shall brace thine Arm, resistless in the Fight.”

XV.

“ Hear’st thou, what Monsters then thou must engage;
“ What Dangers, gentle Youth, she bids thee prove?”
(Abrupt says *Sloth* :) “ ill fit thy tender Age
“ Tumult and Wars; fit Age, for Joy and Love.
“ Turn, gentle Youth, to me, to Love and Joy!
“ To these I lead: no Monsters here shall stay
“ Thine easy Course: no Cares thy Peace annoy:
“ I lead to Bliss a nearer, smoother Way.
“ Short is my Way; fair, easy, smooth, and plain:
“ Turn, gentle Youth! with me eternal Pleasures reign.”

XVI.

“ What Pleasures, vain mistaken Wretch, are thine!”
(*Virtue* with Scorn reply’d :) “ who sleep’st in Ease
“ Insensate; whose soft Limbs the Toil decline
“ That seasons Bliss, and makes Enjoyment please.
“ Draining the copious Bowl, ere Thirst require;
“ Feasting, ere Hunger to the Feast invite:
“ Whose tasteless Joys anticipate Desire;
“ Whom Luxury supplies with Appetite:

“ Yet

540 *On Human Life and Manners.*

“ Yet Nature loaths ; and you employ in vain
“ Variety and Art to conquer her Disdain.

XVII.

“ The sparkling Nectar cool’d with Summer Snows ;
“ The dainty Board, with choicest Viands spread ;
“ To thee are tasteless all ! sincere Repose
“ Flies from thy flow’ry Couch, and downy Bed.
“ For thou art only tir’d with Indolence :
“ Nor is thy Sleep with Toil and Labour bought ;
“ Th’ imperfect Sleep, that lulls thy languid Sense
“ In dull oblivious Interval of Thought :
“ That kindly steals th’ inactive Hours away
“ From the long, ling’ring Space, that lengthens out the Day.

XVIII.

“ From bounteous Nature’s unexhausted Stores
“ Flows the pure Fountain of sincere Delights :
“ Averse to her, you waste the joyless Hours ;
“ Sleep drowns thy Days, and Riot rules the Nights.
“ Immortal tho’ thou art, indignant *Jove*
“ Hurl’d thee from Heaven, th’ Immortals blissful Place ;
“ For ever banish’d from the Realms above,
“ To dwell on Earth, with Man’s degenerate Race :
“ Fitter Abode ! on Earth alike disgrac’d ;
“ Rejected by the Wise, and by the Fool embrac’d.

XIX.

“ Fond Wretch, that vainly weene’st all Delight
“ To gratify the Sense reserv’d for thee !
“ Yet the most pleasing Object to the Sight,
“ Thine own fair Action, never didst thou see.

“ Tho’

On Human Life and Manners. 541

- “ Tho’ lull’d with softest Sounds thou liest along ;
“ Soft Music, warbling Voices, melting Lays :
“ Ne’er didst thou hear, more sweet than sweetest Song
“ Charming the Soul, thou ne’er didst hear thy Praise !
“ No — to thy Revels let the Fool repair :
“ To such, go smooth thy Speech ; and spread thy tempting snare.

XX.

- “ Vast Happiness enjoy thy gay Allies !
“ A Youth of Follies ; an old Age, of Cares :
“ Young, yet enervate ; old, yet never wise ;
“ Vice wastes their Vigour, and their Mind impairs.
“ Vain, idle, delicate, in thoughtless Ease,
“ Reserving Woes for Age, their Prime they spend ;
“ All wretched, hopeless, in the evil Days,
“ With Sorrow to the Verge of Life they tend.
“ Griev’d with the Present ; of the Past ashamed ;
“ They live, and are despis’d : they die, nor more are nam’d.

XXI.

- “ But with the Gods, and God-like Men, I dwell ;
“ Me, his supreme Delight, th’ Almighty Sire
“ Regards well-pleas’d : whatever Works excel,
“ All or Divine, or Human, I inspire.
“ Counsel with Strength, and Industry with Art,
“ In Union meet conjoin’d, with me reside :
“ My Dictates arm, instruct, and mend the Heart ;
“ The surest Policy, the wisest Guide.
“ With me true Friendship dwells : She deigns to bind
“ Those generous Souls alone, whom I before have join’d.

XXII.

544 *On Human Life and Manners.*

Unmov'd in Toils, in Dangers undismay'd,
 By many a hardy Deed and bold Emprize,
 From fiercest Monsters, thro' her pow'rful Aid,
 He free'd the Earth : thro' her he gain'd the Skies.
 'Twas Virtue plac'd him in the blest Abode ;
 Crown'd, with eternal Youth : among the Gods, a God.

This Fable was compos'd by *Prodicus*, and is related by *Xenophon* in his *Memorable Things of Socrates*. As it has been admired by all good Judges for upwards of two thousand Years, and is one of those plain, yet elegant Compositions that will please for ever ; it is here cloath'd in a new Dress by a very eminent Hand, and retains all the native Elegance and Simplicity of the Prose Original, heighten'd with all the Graces of Poetical Ornament. But I will now proceed to the *third* Rule, which I laid down for the Attainment of Human Happiness, which you may remember was the Acquisition of wise and prudent SENTIMENTS and OPINIONS.



What I mean by wise and prudent *Sentiments* and *Opinions*, with regard to the Concerns of Life, is the being able to form a true Judgment, not only of what Things are conducive to Human Happiness, but also in what Degree they are conducive to it, in order to set an exact and just Value upon them. This Knowledge will best be obtained by considering on every Occasion, whether the present Pleasure which you are about to enjoy, may not in its Consequences be destructive of some greater Pleasure ; or whether it may not produce some Pain or Uneasiness, which will more than balance the present Enjoyment. For instance, no Pleasure that can be enjoyed in Wine or Women, or any kind of Sensuality and Voluptuousness, can equal the Enjoyment, or recompense the Loss of Health and Innocence ; and therefore, neither Wine, nor Women, nor any kind of Sensuality, should be pursued at the Hazard of the most inestimable Treasures. The Elegancies of Dress are Pleasures not altogether unworthy the Care and Attention of a wise Man, as they render him agreeable to himself and others ; as they are Proofs of his Rank, and a silent Intimation to
 others



On Human Life and Manners. 545

thers of the Respect with which they are to treat him, and therefore one of the Instruments of Regulation, by which the various Subordinations of Life are adjusted and maintained: but he, who turns all his Thoughts upon Finery, and is every Day trimmed out in Gold and Brocade, has formed a wrong Judgment of Dress, and will undoubtedly be despised as acting the most contemptible of all Characters, that of a Coxcomb. Again, Diversions and Amusements of every innocent kind, may justly be allowed to constitute a Part of Human Happiness; but if they are pursued at too great an Expence for your Circumstances, or so as to take up more of your Time than is consistent with your other more rational Pursuits, or to such a degree as to dissipate your Mind, and to render you unfit for Study or Business; instead of affording you Happiness, you will find they conduct you only to Misery. I could go on to shew you the Importance of acquiring right *Sentiments* in many other Instances, but I will close the whole of my Instructions to you on this Head, and finish your Education in general with the celebrated *Picture of Human Life*, by *Cebes* the *Theban*, a Disciple of *Socrates*, and one of those who assisted him in his last Hours; which I earnestly recommend to your most serious Study and frequent Perusal. It is translated into *English*, by a Person considerably distinguished in the Republic of Letters, and is as follows.

THE PICTURE OF HUMAN LIFE.

Translated from the Greek of Cebes, a Disciple of Socrates,

AS we were walking in the Temple of *Saturn*, and observing several of the Presents dedicated to that God, we were particularly struck with a Picture, hung up before one of the Chapels. Both the Manner and the Subject of it, seemed to be foreign; so that we were at a loss to know, either whence, or what it was. What is represented was neither a City, nor a Camp; but an Inclosure, containing two other Inclosures, the one larger, and the other less. To the outer Inclosure, there was a Portal, with a great Number of Persons standing before it, and several Females within; and an aged Man standing by the Portal, in the Attitude of giving Directions to those who were going in.

After we had been debating among ourselves for some time, what all these Things should mean; an elderly Person,

546 *On Human Life and Manners.*

son, who happened to be by, addressed himself to us in the following manner.

Old Citizen. As you are Strangers, it is no Wonder that you should be at a loss to find out the Meaning of this Picture; since several of the Natives of this City themselves know not the true Intent of it: And indeed it was not placed here by any of our Citizens, but by a Stranger who visited these Parts several Years ago. He was a very sensible Man, and a great Philosopher; and both in his Conversation and Practice, seemed to approach nearer to the Doctrines of *Pythagoras* and *Parmenides*, than to any other of our Sects. It was he who built this Temple, and dedicated this Picture in it to *Saturn*.

Stranger. Have you then seen the very Person who gave it? and was you acquainted with him?

O. C. Yes, I was both well acquainted with him, and admired him very much; for though he was rather young, his Conversation was full of Wisdom; and, among other Things, I have often heard him explaining the Subject of the Picture before us.

S. I intreat you, if it will not be too troublesome, to acquaint us with his Explanation of it; for 'tis what we are all longing to know.

O. C. That would be rather a Pleasure than any Trouble to me; but I ought to forewarn you of one thing before I begin, which is this, that the hearing it is attended with some Danger.

S. What Danger can there be in that?

O. C. It is no less than this, that if you observe and follow the Lesson that it gives you, it will make you wise and happy; but if you neglect it, you will be most miserable and wretched all your Days. So that the explaining of this, is not unlike the Riddle said to have been proposed to People by the Sphynx, which if the Hearer understood, he was saved; but if not, he was to be destroy'd. It is much the same in the present Case; for Ignorance is full as dangerous in Life, as the Sphynx was supposed to be in the Fable. Now the Picture before us includes all the Doctrine of what is Good in Life, what is Bad, and what Indifferent; so that if you should take it wrong, you will be destroy'd by it; not indeed all at once, as the People were by that Monster; but by little and little, thro' all the Residue of your Life, as those are who are given up to be put to Death by slow Tortures. On the contrary, if you understand it aright, then will your Ignorance



On Human Life and Manners. 545

rance be destroy'd, and you will be sav'd, and become happy and blest for all the rest of your Days. Do you, therefore, attend carefully to what I shall say to you, and observe it as you ought.

S. O Heavens, how have you increased our longing to hear, what may be of such very great Importance to us!

O. C. It is certainly of the greatest that can be.

S. Explain it then to us immediately, we beseech you; and be assured, that we will listen to you with all the Care and Attention, that a Matter which concerns us so greatly must demand.

O. C. You see, this grand Inclosure. All this Circuit, is the CIRCUIT OF HUMAN LIFE; and that great Number of People standing before the Portal, are those who are to enter into Life. This aged Person, who stands by the Entrance holding a Paper in one of his Hands, and pointing with the other, is the GENIUS who directs all that are going in, what they should do after they are enter'd into Life; and shews them which Way they ought to take in order to be happy in it.

S. And which is the Way that he shews them? Where is it?

O. C. Do you see that Seat on the other Side, before the Portal; and the Woman sitting on it, with a Cup in her Hand? She who is so finely dress'd out, and makes so plausible an Appearance?

S. I see her; and pray, who is she?

O. C. She is DECEIT, the Misleader of Man.

S. And what does she do there?

O. C. As they are entering into Life, she offers them to drink of her Cup.

S. And what does her Cup contain?

O. C. Ignorance and Error; of which when they have drunk, they enter into Life.

S. And do all drink of this Cup?

O. C. All drink of it; but some more, and some less. A little farther, within the Portal, don't you see a Company of loose Women, with a great deal of Variety both in their Dress and Airs?

S. I see them.

O. C. Those are the OPINIONS, DESIRES, and PLEASURES; who, as the Multitude enter, fly to them; embrace each of them with great Earnestness; and then lead them away with them.

548 *On Human Life and Manners.*

S. And whither do they lead them?

O. C. Some to the Way of Safety; and others to Perdition through their Folly.

S. Ah, why did they drink of that Liquor before they came in!

O. C. All of them alike tell those whom they are embracing, that they will lead them to what is best, and will make their Lives quite happy: whilst the Comers blinded by the large Draughts they have taken from the Cup of DECEIT, are incapable of distinguishing which is the true Way in Life; and wander about inconsiderately, here and there, as you see they do. You may observe too, that they who have been in some time, go about just as these direct them.

S. They do so. But, pray, who is that Woman who seems to be both blind and mad, and who stands on that round Stone there?

O. C. That is FORTUNE; and she is really not only mad and blind, but deaf too.

S. What can her Business be?

O. C. She flies about every where, and snatches what he has from one, to give it to another; and then takes it away again from him, to give it to a third; without any manner of Meaning, or any Degree of Certainty: which latter is very aptly signified by her Figure here.

S. How so?

O. C. By her standing on that round Stone, which shews that there is no Stability or Security in her Favours; as all who trust to her find, by some great and unexpected Fall.

S. And what does all that Company about her want of her? And how are they called?

O. C. They are called THE INCONSIDERATES, and are begging for some of those Things which she flings about her.

S. And why do they appear with such a Diversity of Passions? Some of them as overjoy'd, and others as very much distressed?

O. C. They who smile and rejoice, are such as have receiv'd something from her Hand; and these call her by the Title of GOOD FORTUNE: and such as weep and mourn, are they from whom she has resum'd what she had before given them; and these call her BAD FORTUNE.

S. And

On Human Life and Manners. 549

S. And what is it she gives, that shou'd make the former rejoice so much on the receiving it, and the latter lament so much at the Loss of it?

O. C. All those Things which the greatest Part of Mankind think good, such as Wealth, and Glory, and Nobility, and Offspring, and Dignities, and Crowns; and all such Sort of Things.

S. And are not these really good Things?

O. C. As to that we may talk more at large another time; but at present, if you please, let us stick to our Picture. You see then, after entering this Portal, there is another Inclosure, on a rais'd Ground, and several Women standing before it, dress'd out too, much like Ladies of Pleasure.

S. They are so.

O. C. Of these, this is **INTEMPERANCE**; that **LUXURY**; this is **AVARICE**; and that other, **FLATTERY**.

S. And what do they stand there for?

O. C. They are waiting for those who have receiv'd any thing from **FORTUNE**; and as they meet with them, they embrace them with the greatest Fondness, attach themselves to them, do every thing they can to please them, and beg them to stay with them; promise them to render their whole Lives delightful, easy, and free from all manner of Care or Trouble. Now whoever is carried away by them to **VOLUPTUOUSNESS**, will find their Company agreeable to him at first, whilst they are fondling and tickling his Passions; but it is soon quite otherwise; for when he recovers his Senses, he perceives that he did not enjoy them, but was enjoy'd by them; and that they prey upon him, and destroy him. And when he has, by their means, consum'd all that he had receiv'd from **FORTUNE**, then is he oblig'd to become their Slave, and to bear all the Insults they are pleas'd to impose upon him, to yield to all the most scandalous Practices, and in the end, to commit all Sorts of Villainies for their Sake; such as Betraying, Defrauding, Robbing, Sacrilege, Perjury, and the like: and when all these fail him, then is he given up to **PUNISHMENT**.

S. And where is she?

O. C. Don't you see there, a little beyond those Women, a narrow dark Cavern, with a small Sort of Door to it, and some miserable Women that appear within, clad only in Filth and Rags?

S. I see them.

550 *On Human Life and Manners.*

O. C. She who holds up the Scourge in her Hand, is PUNISHMENT; this, with her Head sunk almost down to her Knees, is SORROW; and that other tearing her Hair, is ANGUISH OF MIND.

S. And pray, who is that meagre Figure of a Man without any Cloaths on, just by them? And that lean Woman, that resembles him so much in her Make and Face?

O. C. Those are REPINING, and his Sister DESPAIR. To all these is the Wretch I was speaking of deliver'd up, and lives with them in Torments, till finally he is cast into the House of MISERY; where he passes the Remainder of his Days in all kinds of Wretchedness; unless, by chance, REPENTANCE should fall in his way.

S. What happens then?

O. C. If REPENTANCE should chance to meet with him, she will take him out of the evil Situation he was in, and will place a different OPINION and DESIRE before him: one, of those which lead to TRUE SCIENCE; and the other, of those which lead to SCIENCE falsely so called.

S. And what then?

O. C. If he embraces that which leads to TRUE SCIENCE, he is renew'd and sav'd, and becomes a happy Man for all his Days; but if the other, he is bewilder'd again by FALSE SCIENCE.

S. Good Heaven! what a new Danger do you tell me of! And pray, which is FALSE SCIENCE?

O. C. Do you see that second Inclosure?

S. Very plainly.

O. C. And don't you see a Woman standing without the Inclosure, just by the Entrance into it, of a very striking Appearance, and very well dress'd?

S. As plainly.

O. C. That is she whom the Multitude, and all the unthinking Part of Mankind, call by the Name of Science; tho' she is really FALSE SCIENCE. Now those who are sav'd out of the House of MISERY call in here, in their Passage to TRUE SCIENCE.

S. Is there then no other Way to TRUE SCIENCE but this?

O. C. Yes, there is.

S. And pray, who are those Men that are walking to and fro within the Inclosure?

O. C. Those who have attach'd themselves to False Science, mistaking her for the True.

S. And what are they?

O. C. Some

On Human Life and Manners. 551

O. C. Some of them are Poets, some Rhetoricians, some Logicians, some Students in Music, Arithmetic, and Geometry: Pleasurists, Peripatetics, Critics, and several others of the same Rank.

S. And who are those Women who seem so busy among them, and are so like *INTEMPERANCE*, and her Companions, in the first Inclosure?

O. C. They are the very same.

S. Are they then admitted into this second Inclosure?

O. C. Yes indeed; but not so readily, or frequently, as in the first.

S. And are the *OPINIONS* too admitted?

O. C. Undoubtedly; for the Persons who belong to this Inclosure, have not yet got rid of the Draught which they took out of the Cup of *DECEIT*.

S. What then, *IGNORANCE* remains still with them?

O. C. That it does, and *FOLLY* too; nor can they get rid of the *OPINIONS*, nor all the rest of this vile Train, till they quit False Science, and get into the Way of the True; till they drink of her purifying Liquor, and wash away all the Dregs of the Evils that remain in them; which that, and that only, is capable of doing. Such therefore as fix their Abode with False Science will never be delivered; nor can all their Studies clear them from any one of those Evils.

S. Which then is the Way to *TRUE SCIENCE*?

O. C. Do you see that Place on high there, that looks as if it were uninhabited?

S. I do.

O. C. And do you discern a little Opening between the Rocks, and a small Track leading to it, which is scarce beaten; and with very few People walking in it, as it is all rough, and stony, and difficult?

S. I discern it very plainly.

O. C. And don't you see a high Cliff on the Hill, almost inaccessible, and with several Precipices about it?

S. I see it.

O. C. That is the Way which leads to *TRUE SCIENCE*?

S. It is frightful only to look upon it.

O. C. And up above that Cliff, don't you see a large rising Rock, all surrounded with Precipices?

S. I see it.

O. C. Then you see also the two Women that stand upon it, with so much Firmness and Beauty in their Make, and how earnestly they extend their Hands.

S. I do so; and pray, who are they?

O. C. Those two are Sisters, and are called **TEMPERANCE** and **PERSEVERANCE**.

S. And why do they extend their Hands so earnestly?

O. C. They are encouraging those who are arriv'd to that Rock, and calling out to them to be of good Heart, and not to despond, because they have but a little more to suffer, and then will find the Road all easy and pleasant before them.

S. But how can they ever get up upon that Rock itself? for I don't see any the least Path to ascend it by.

O. C. The two Sisters descend to meet them, and help them up. Then they order them to rest a little, inspire them with new Strength and Resolution, and promise to conduct them to **TRUE SCIENCE**; point out the Way to them, make them observe how even and easy, and charming it is; and how free from all manner of Difficulty or Danger, as you see it represented here.

S. How well does it answer the Description!

O. C. You see before that Grove, the Ground that extends itself into a beautiful Meadow, with such a lively Light over it.

S. Very plainly.

O. C. Then you see the third Inclosure, in the Midst of that Meadow, and the Portal to it.

S. I do so; and pray, what do you call this Place?

O. C. The Habitation of the Blest; for here it is that **HAPPINESS**, and all the **VIRTUES** dwell.

S. What a charming Place have they to dwell in!

O. C. And do you observe the Lady near the Portal, with so beautiful and steady a Look; of a middle Age, or rather a little past it, and dress'd in a long plain Robe, without any the least Affectation of Ornaments? She is standing there, not on a round Stone, but a square one, firmly fix'd in the Ground; and by her are two other Women, who look as if they were her Daughters.

S. They do so.

O. C. Of these, she in the Midst is **SCIENCE**, and the other two are **TRUTH** and **PERSUASION**.

S. And why does **SCIENCE** stand on that square Stone?

O. C. To signify, that her Ways are Ways of Certainty, and that the Presents which she gives to those that arrive to her, are firm and lasting.

S. And



On Human Life and Manners.

553

S. And what is that she gives to them?

O. C. Strength and Tranquility of Mind, arising from a full Assurance, that they shall never undergo any Evil again in their whole Lives.

S. O Heavens; how desirable are her Presents! But why does she stand thus without the Inclosure?

O. C. To receive those that arrive thither, and give them to drink of her purifying Liquor, and to conduct them into the Presence of the VIRTUES within, when they are thoroughly cleans'd by it.

S. I don't rightly understand what you mean by this cleansing.

O. C. I will make that clear to you. Suppose any Friend of yours was afflicted with some dangerous Fit of Illness; if he goes to some knowing Physician, and takes what he prescribes, in order to root out the Causes of his Disease, he may be restored to a perfect State of Health; but if he refuses to take what is ordered him, his Physician will give him up, and leave him to be destroyed by his Dis-temper.

S. That is clear enough.

O. C. In the very same manner, when any one comes to SCIENCE, she takes him under her Care, and gives him a Draught of her Cup to cleanse him, and drive out all the noxious Things that are in him.

S. And what are those noxious Things?

O. C. The Error and Ignorance that he drank out of the Cup of DECEIT; and his Arrogance, and Lust, and Intemperance, and Anger, and Covetousness; in short, all the evil Impressions and Habits that he had contracted in his Passage thro' the first Inclosure.

S. And when she has cleansed him from all these, whither does she send him?

O. C. In thro' that Portal, to KNOWLEDGE, and the other VIRTUES.

S. And where are they?

O. C. Don't you see, within the Portal, a select Company of Ladies, of singular Beauty and Decency, both in their Look and Dress; and in a word, with every thing handsome, and nothing affected about them?

S. I see them, and should be glad to know their Names.

O. C. That at the Head of them is KNOWLEDGE, and the rest are all her Sisters, FORTITUDE, JUSTICE, HONESTY,

TY, PRUDENCE, DECENCY, FREEDOM, TEMPERANCE, and CLEMENCY.

S. What Beauties they are ! and what a longing Desire do they inspire one with to enjoy their Companies !

O. C. That you may do, if you are wise enough to follow the Way that I have shown you.

S. That will I strive to do, as far as I am able.

O. C. Then you will arrive safely to them.

S. And when these have received any one, whither do they carry him ?

O. C. To their Mother,

S. And who is she ?

O. C. HAPPINESS.

S. And where ?

O. C. Do you see the Way which leads to that high Edifice, which appears above all the Inclosures, as a Citadel does above all the Buildings in a City !

S. Yes.

O. C. And do you see that composed, beautiful Lady, sitting on a Throne in the Portico to it, with so easy and disengaged an Air, and with that beautiful Chaplet of fresh Flowers on her Head ?

S. How beautiful does she look !

O. C. She is HAPPINESS.

S. And when any one arrives to her, what does she do to him ?

O. C. HAPPINESS, assisted by all the Virtues, crowns him with her own Influences ; in the same manner as they are crowned, who have obtained the greatest Conquests.

S. But what Conquests has he obtained ?

O. C. The greatest Conquests, and over the most terrible of Monsters, which formerly devoured, and tormented, and enslaved him. All these has he conquered, and driven from him ; and is become so much Master both of himself and them, as to make those things obey him, which he himself obeyed before.

S. I don't yet comprehend what Monsters you mean ; and should be very glad to know.

O. C. In the first place, his Ignorance and Error ; will you not allow them to be Monsters ?

S. Yes, and very dangerous ones too.

O. C. Then, his Sorrows, and Repinings, and Covetings, and Intemperance, and every thing that is bad. All these

has

has he subdued, and is not subdued by them as he used to be.

S. O glorious Exploits! and most noble of all Victories! But be so good as to inform me yet farther, what may be the Influence of the Crown, with which you were saying he was to be crowned?

O. C. It is that which renders him happy: for he who has it once on his Head, immediately becomes easy and blest; and does not place his Hopes of Happiness in any thing without him, but possesses it in his own Breast.

S. How desirable is such an Acquisition! And after he is crowned, what does he do? or whither does he go?

O. C. The VIRTUES take him, and lead him to the Place that he had left, and bid him observe those who continue there, amidst what Difficulties and Troubles they pass their Time; and how they are shipwreck'd in Life, or wander about in it; or are conquered, and led along like Captives, some by INTemperance, and others by ARROGANCE; here by COVETOUSNESS, and there by VAIN-GLORY, or any other of the VICES: whose Chains they are in vain striving to get loose from, that they might escape, and get to this Place of Rest: so that their whole Life seems to be nothing but one ineffectual Struggle. And all this they suffer from their mistaking the right Way, and forgetting the Orders given them by the directing GENIUS.

S. That appears to me to be the Case; but I don't so clearly see, why the VIRTUES lead the Person that has been crown'd, back to the Place that he had left.

O. C. Because, he had never formed a full and exact Idea of the Things that passed there; but at best, had only guessed and doubted about them; for from the Draught of Ignorance and Error that he had taken at his Entrance, he had imagined Things that were bad to be good, and Things that were good to be bad; by which means he had lived wretchedly, as indeed all do while they are there. But now that he has obtained the Knowledge of what is really good, he can both live happily himself, and can see how very unhappy the others are.

S. And when he has taken a full View there, what does he do, or whither does he go?

O. C. Wherever he pleases, for every where is he as safe as one that is got into the *Corycian* Cave; so that wheresoever he goes, he lives in full Security, and undisturbed Happiness; and is received by all others, with as much Pleasure as a good Physician is by his Patients.

S. And

S. And has no longer any Dread of those Females which you called Monsters? nor any Apprehension of being hurt by them?

O. C. Not in the least; for he will never any more be molested either by ANGUISH, or SORROW, or INTemperance, or COVETOUSNESS, or POVERTY, or any other Evil; for he is now Master of them all, and superior to every thing that formerly gave him any Trouble. As they who practise the catching of Vipers, are never hurt by the Bite of those Creatures, which is so venomous, and even mortal to others, because they have an Antidote against their Poison; so he is safe from any Influence of all these Evils, because he has the Antidote against them.

S. That you have explained to me very well; but I beg you would tell me yet farther, who they are that are descending from the middle of the Rock, some of them crowned, and with an Air of Joy on their Countenances; and others without Crowns, that seem to have been rejected, and have the Marks of several Falls about them, and are followed by certain Women.

O. C. They, who are crowned, are such as got safe to SCIENCE, and are delighted with the Reception that she has given them; and those without Crowns, who seem to have been rejected by her, and are returning in so bad a Condition, are such as found their Hearts fail them, when they came to the Precipice where PATIENCE stands; and turned back from that Point, and are now wandering irregularly they know not whither.

S. And who are the Women that are following them?

O. C. They are SORROW and ANGUISH, and DESPAIR and INFAMY, and IGNORANCE.

S. By your Account, they are attended by every thing that is bad!

O. C. Undoubtedly they are, but when they are got down into the first Inclosure, to VOLUPTUOUSNESS and INTemperance, they don't lay the Blame on themselves, but immediately say all the ill Things they can of SCIENCE, and of those who are going to her; and tell how miserable and wretched those poor People are, and how much they suffer, who leave the Life they might have enjoyed below, and the good Things bestowed there.

S. And what are the good Things which they mean?

O. C. Luxury and Intemperance; to say all in two words; for to indulge their Passions like brute Beasts, is
what



On Human Life and Manners. 557

what they look upon as the Completion of all their Happiness.

S. And those other Women that are coming down there, who look so gay and so well-pleased with themselves, what are they?

O. C. The OPINIONS, who after conducting those to SCIENCE, who have gained Admission to the VIRTUES, are returning to bring up others, and to acquaint them how happy those are, whom they have already conducted up thither.

S. And have they been admitted to the Virtues themselves?

O. C. By no means; for 'tis not allowable for OPINION to enter, where KNOWLEDGE has her Dwelling. Their Business therefore was only to conduct them to SCIENCE; and when she has receiv'd them, they turn back again to bring others; like Transport-Ships, which as soon as they have deliver'd one Freight, return for another.

S. You have now, I think, very well explain'd all the Figures in the Picture; but you have not yet told us what Directions they were, which the Genius at the first Portal gives to those that are entering into Life.

O. C. He bids them be of good Courage. Wherefore be you also of good Courage; for I will tell you the whole, and leave no one Thing unexplain'd to you.

S. We shall be extremely obliged to you.

O. C. You see that blind Woman there, on the round Stone, who I told you before was FORTUNE.

S. I see her.

O. C. As to that Woman, he orders them not to place any Confidence in her, nor to look on any of her Gifts as firm, or secure; nor to consider them as their Property; for there is no hindering her from resuming them, and giving them to any body else; and 'tis what she is extremely apt to do. He therefore orders them to regard all her Presents with Indifference, and not to rejoice if she makes them any, nor to be dejected if she takes them away, and to think neither well nor ill of her; for whatever she does is done without Thought, and all by mere Chance and Accident, as I have acquainted you already. 'Tis on this Account that the Genius commands them, not to attach themselves to any thing she can give; nor to be like those simple Bankers, who when they have receiv'd any Sum of Money in Trust, are apt to be pleased with it, and look upon it as
their

358 *On Human Life and Manners.*

their own ; and when they are called upon to repay it, grow uneasy, and think it very hard ; not considering that it was deposited in their Hands on that very Condition, that the true Owners might demand it again whenever they pleased. Just thus the GENIUS commands Men to look upon all the Gifts of FORTUNE : and to be aware, that she may recall them whenever she has a Fancy to do it ; or may send in more, and if she pleases, may resume that and the former all together. He therefore commands those who are entering into Life, to receive whatever she offers them, and as soon as they have receiv'd it, to go on in quest of a more lasting Acquisition.

S. What Acquisition do you mean ?

O. C. That which they may obtain from SCIENCE if they can arrive safe to her.

S. And what is that she gives them ?

O. C. The true Knowledge of what is really good, and the firm, certain, and unchangeable Possession of it. He therefore commands them to quit Fortune immediately, in Pursuit of this ; and when they come to those Women, who, as I told you before, were INTemperance and Voluptuousness, to leave them too directly, and not to mind whatever they can say ; but to go on for the Inclosure of FALSE SCIENCE ; there he bids them stay a little while, to get what may be useful to them on the rest of their Road, and then to leave her directly too, and go on for TRUE SCIENCE. These are the Orders which the GENIUS gives to all that enter into Life ; and whoever transgresses or neglects them, will be a miserable Wretch. I have now explain'd the whole of the Parable contain'd in this Painting ; but if you have any particular Question to ask in relation to any thing that I have said, I am very ready to answer it.

S. We are much obliged to you. Pray then, what is it that the GENIUS orders them to get in the Inclosure of Science, falsely so called ?

O. C. Whatever may be of use to them.

S. And what is there, that may be of use to them ?

O. C. Literature, and so much of the Sciences, as *Plato* says, may serve People in the beginning of their Lives as a Bridle, to keep them from being drawn away by idler Pursuits.

S. And is it necessary for all who would arrive at True Science, to do this ?

O. C.

O. C. No, it is not necessary, but it may be useful; tho' in truth, these things themselves do not contribute towards making them the better Men.

S. Not contribute at all towards making them better!

O. C. Not at all, for they may be as good without them. And yet they are not wholly unuseful; for they may sometimes help us, as Interpreters do, to the Meaning of a Language we don't understand: But after all, 'tis better to understand the Language ourselves, than to have any need of an Interpreter; and we may be good, without the Assistance of Learning.

S. In what then have the Learned any Advantage over others, towards becoming better Men?

O. C. Why do you imagine they should have any Advantage; since you see they are deceiv'd like others, as to what is good or bad; and continue to be as much involved in all manner of Vices? For there is nothing that hinders a Man, who is a Master of Literature, and knowing in all the Sciences, from being at the same time a Drunkard, or Intemperate, or Covetous, or Unjust, or Villainous, or in one word, Imprudent in all his Ways.

S. 'Tis true, we see too many Instances of such.

O. C. Of what Advantage then is their Learning, towards making them better Men?

S. You have made it appear, that it is of none; but pray what is the Reason of it?

O. C. The Reason is this: That when they are got into the second Inclosure, they fix there as if they were arriv'd at True Science. And what can they get by that? since we see several Persons, who go on directly from *INTEMPERANCE*, and the other *VICES* in the first Inclosure, to the Inclosure of *TRUE SCIENCE*; without ever calling in, where these learned Persons have taken up their Abode. How then can the Learned be said to have any Advantage over them? On the contrary, they are less apt to exert themselves, or to be instructed, than the former.

S. How can that be?

O. C. Because, they who are in the second Inclosure, not to mention any other of their Faults, at least profess to know, what they do not know: So that they acquiesce in their Ignorance, and have no Motive to stir them up towards the seeking of *TRUE SCIENCE*. Besides, do you not observe another thing; that the *OPINIONS*, from the first Inclosure, enter in among them, and converse with them, as freely as with the former? So that they are not
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560 *On Human Life and Manners.*

at all better even than they ; unless REPENTANCE should come to them, and should convince them, that it is not SCIENCE they have been embracing all this while ; but only the false Appearance of her, which has deceived them. But while they continue in the same Mind they are in, there is no Hope left for them. To close all, my Friends, what I would entreat of you is, to think over every thing I have said to you, to weigh it well in your Minds, and to practise accordingly. Get a Habit of doing right, whatever Pain it costs you ; let no Difficulties deter you, in the way to VIRTUE : and account every thing else despicable, in comparison of this. Then will the Lesson that I have taught you, prove to yourselves a Lesson of HAPPINESS.

F I N I S.







